

New Howard County

Circuit Courthouse

PPP Solicitation

Addendum No. 18 – Schedule 5

Appendix 4

Design & Construction

Standards

HOWARD COUNTY, MARYLAND

OFFICE OF PURCHASING

6751 Columbia Gateway Drive, Suite 501, Columbia, MD 21046

ADDENDUM NO. 18
ISSUED APRIL 13, 2018
REQUEST FOR PROPOSALS

RFP NO. 10-2018

HOWARD COUNTY CIRCUIT COURTHOUSE PROJECT

TECHNICAL PROPOSALS DUE: MAY 10, 2018 AT 11:00 A.M.

FINANCIAL PROPOSALS DUE: MAY 24, 2018 AT 11:00 A.M.

This Addendum is hereby made a part of this RFP No. 10-2018. Note the following information and submit the Proposal accordingly.

Clarifications/Changes

- Design and Construction Standards: Please note additional revisions have been made to the Design and Construction Standards since Addendum No. 17. The County expects the Design and Construction Standards issued in this Addendum No. 18 to be the final version issued. All changes to the Design and Construction Standards since March 20, 2018 are highlighted in the attachment labeled "Schedule 5 – Design and Construction Standards (Appendix 4 to the Draft Project Agreement) (Revised 4-12-18)". Proposers should also review the attachment labeled "FF&E Q&A Supplement" for further clarification on the Moveable Furniture, Fixtures and Equipment requirements.

- Project Agreement, Project Agreement Appendices and Project Agreement Transaction Forms: Please see the attachments both clean and redlines to this Addendum for all changes made to the Project Agreement, Project Agreement Appendices and Project Agreement Transaction Forms since their last issuance. **Proposers may provide additional comments on these documents, but only these documents, until 11:00 a.m. Eastern time on April 18**. Such comments shall be limited to any material significant concerns that may prevent the Proposer from making a Proposal or to highlight clear errors or omissions in the documents. It is the County's intention to review any final comments received and issue the final Draft Project Agreement and related materials by April 20, 2018.

- RFP, RFP Proposal Forms and RFP Schedules: Please see the attachments, both clean and redlines to this Addendum for all changes made to the RFP, RFP Proposal Forms and RFP Schedules since their last issuance. The County expects the RFP, RFP Proposal Forms and RFP Schedules issued in this Addendum No. 18 to be the final version issued.

- Permit Fees and Excise Tax: In preparing Proposals, Proposers should note that the County intends to waive any application fees for any permits necessary for the Project that will be issued by a County department. In addition, the County intends to waive the building excise tax that would otherwise be applied pursuant to Subtitle 5 (Building Excise Tax) of Title 20 (Taxes, Charges and Fees) of the County Code and County Council Resolution #68-2017, effective July 1, 2017.

Attachments

- Schedule 5 – Design and Construction Standards (Appendix 4 to the Draft Project Agreement) (Revised 4-12-18)
- FF&E Q&A Supplement
- Revised Draft Project Agreement – April 13, 2018 (Clean)
- Revised Draft Project Agreement Appendices – April 13, 2018 (Clean)
- Revised Draft Project Agreement Transaction Forms – April 13, 2018 (Clean)
- Full Redline – Revised Draft Project Agreement (April 13)
- Full Redline – Revised Draft Project Agreement Appendices (April 13)
- Full Redline – Revised Draft Project Agreement Transaction Forms (April 13)
- Changed Pages Only Redline – Revised Draft Project Agreement (April 13)
- Changed Pages Only Redline – Revised Draft Project Agreement Appendices (April 13)
- Changed Pages Only Redline – Revised Draft Project Agreement Transaction Forms (April 13)
- Revised RFP – April 13, 2018 (Clean)
- Revised RFP Proposal Forms – April 13, 2018 (Clean)
- Revised RFP Schedules – April 13, 2018 (Clean)
- Full Redline – Revised RFP (April 13)
- Full Redline – Revised RFP Proposal Forms (April 13)
- Full Redline – Revised RFP Schedules (April 13)
- Changed Pages Only Redline – Revised RFP (April 13)
- Changed Pages Only Redline – Revised RFP Proposal Forms (April 13)
- Changed Pages Only Redline – Revised RFP Schedules (April 13)

All other specifications, terms and conditions remain the same, in the event of any conflicts between this Addendum and any prior issuance pursuant to this RFP, this Addendum replaces and supersedes such prior issuance and documents.

Please acknowledge this Addendum by signing below and returning with the Proposal. Failure to acknowledge this Addendum may be cause for rejection of the Proposal.

ADDENDUM RECEIVED BY:

_____
Signature

_____
Company Name

_____
Title

DPH

NEW HOWARD COUNTY CIRCUIT COURTHOUSE
PPP SOLICITATION
Appendix 4 - Design and Construction Standards

April 12, 2018

ARCADIS
G+P GRIMM AND PARKER
RICCIGREENEASSOCIATES
Gipe Associates, Inc. CONSULTING ENGINEERS Mechanical | Electrical | Plumbing
PSE PROFESSIONAL SYSTEMS ENGINEERING, LLC
Pennoni
LERCH BATES Building Insight

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1. SPACE PROGRAM AND ROOM DATA SCHEDULE

1.1 Space Program

The Project Company shall provide all spaces included in the space program at the square foot area detailed in the space program for each space at a minimum. The total departmental gross square foot area must also be provided for each space program component.

The space program is organized by major program components consisting of Court departments and divisions, other tenant agencies, and building support space. For each major program component, a list of spaces is provided, expressing spaces as *net square feet* (NSF), which is the area "between the walls" of the room or space, and the quantity of each space. The NSF of programmed space in the Space Program is a Design and Construction Requirement, however, the Gross Square Feet (GSF) shall be dependent on the Project Company's design solution. Each space also includes a Room Data code, which references the applicate room data requirements included in Section 1.2 Room Data Sheets for the space.

Although not included in this program, the total NSF for each major program component is totaled and multiplied by a departmental grossing factor, which results in the total *departmental gross square feet* (DGSF) for the major program component. The departmental grossing factor accounts for circulation area and internal wall thickness within each component.

DGSF for each major program component is the total of which is summed and multiplied by a *building grossing factor,* which accounts for public circulation area (elevator lobbies, public and interdepartmental corridors, stairs and elevators); mechanical space; vertical shafts; exterior wall thicknesses; electrical closets; public restrooms; and staff restrooms not identified in the space program but required by code.

Typical Departmental Grossing Factors are identified in the table below:

Department	**Circulation**
Courtroom Sets	1.25
Judicial Officers	1.35
Transaction Offices	1.35
Central Detainee Holding	1.75
Supplemental Operations	1.30
-Jury Pool	1.10
-Court Officers	1.10
-Trial Court Secure Waiting Area	1.15
Public Areas	1.25
Staff Support	1.30

Program Summary

Component	Space Requirement Total NSF
1. Court Sets	26,730
2. Hearing Rooms	4,880
3. Judges	11,924
4. Magistrates	1,868
5. Court Administration	1,710
6. Calendar Management	1,189
7. Family Law	1,358
8. Clerk of the Courts	7,281
9. Register of Wills	2,163
10. Orphan's Court	2,155
11. Court Reporters	891
12. Law Library	1,463
13. Jury Assembly	3,884
14. Sheriff	14,941
15. State's Attorney	12,014
16. Public Defender	501
17. Department of Juvenile Services	3,883
18. Department of Social Services	880
19. Bar Association	565
20. Building Support	15,040
Total Net Square Feet	**115,320**

1. Court Sets

Space No.	Component	Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
	Court Set Space					
1.01	Large Courtroom	HR1	2,400	1	2,400	110 spectators, 16-person jury box, 3-judge panel
1.02	Standard Courtroom Type 1	HR1	2,100	1	2,100	75 spectators, 16 person jury box, 3-judge panel
1.03	Standard Courtroom Type 2	HR1	1,900	4	7,600	75 spectators, 16 person jury box, 1-judge panel
1.04	Civil Courtroom - Holding Access	HR1	1,400	2	2,800	35-40 spectators, 8 person jury box
1.05	Courtroom Vestibule	VS1	75	8	600	1 per Courtroom
1.06	Courtroom Waiting	WA1	240	8	1,920	12 sf. per person, 20 persons waiting
1.07	Courtroom Storage	ST1	50	8	400	1 per Courtroom
1.08	AV Closet	TC1	40	4	160	1 per 2 Courtrooms, Enclosed
1.09	Attorney/Client Conference Rm	CF1	100	8	800	1 per Courtroom
1.10	Large Attorney/Client Conference Rm	CF1	150	8	1,200	1 per Courtroom
1.11	Jury Deliberation Room	CF5	375	6	2,250	1 per Large or Standard Courtroom
1.12	Jury Deliberation Room - Civil Ct.	CF5	250	2	500	1 per Civil Courtroom
1.13	Jury Toilet	TO1	50	16	800	2 per Jury Deliberation room
1.14	Jury Deliberation Vestibule	VS2	50	8	400	1 per Jury Deliberation room
1.15	Robing Room	OF5	120	8	960	assumes collegial chambers
1.16	Robing Room Toilet	TO2	50	8	400	assumes collegial chambers
1.17	Holding Soundlock	VS3	80	4	320	1 per Courtroom pair
1.18	Holding Cell	HO1	80	10	800	3 per Courtroom pair, 1 per Civil Courtroom pair
1.19	Holding Vestibule	VS3	80	4	320	1 per courtroom pair
	Sub-total				**26,730**	
Total Net Square Feet (NSF)					**26,730**	

2. Hearing Rooms

Space No.	Component	Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
	Hearing Room Space					
2.01	Hearing Room	HR2	900	3	2,700	20 spectators
2.02	Hearing Room Waiting	VS1	240	3	720	12 sf. per person, 20 persons waiting
2.03	Holding Soundlock	VS3	80	2	160	1 per Hearing Room pair
2.04	Holding Cell	HO1	80	4	320	2 per Hearing Room pair
2.05	AV Closet	TC1	40	2	80	1 per 2 Hearing Rooms, Enclosed
2.06	Attorney/ Client Conference Room	CF1	100	6	600	2 per Hearing Room
2.07	Settlement Conference Room	CF3	300	1	300	8-10 people, accom. adversarial parties
	Sub-total				**4,880**	
Total Net Square Feet (NSF)					**4,880**	

3. Judges

Space No.	Component	Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
	Judge's Chamber Staff Space					
3.01	Judge	OF4	300	8	2,400	includes 135 LF bookcase shelving
3.02	Judge's Toilet	TO2	50	8	400	
3.03	Secretary / Reception / Waiting	WA2	200	8	1,600	
3.04	Law Clerk	OF1	120	8	960	
3.05	Intern	WS2	36	8	288	
	Sub-total				**5,648**	
	Judge's Chamber Support Space					
3.06	Copier and Supply Storage	OS1	80	8	640	1 per chamber suite
3.07	File: Lateral Cabinet	OS3	9	24	216	3 per chamber suite
3.08	File: Open Shelving	OS3	9	48	432	6 units (126 LF) per chamber suite
3.09	Coat Closet	ST3	15	8	120	1 per chamber suite
	Sub-total				**1,408**	
	Judge's Chamber Shared Support Space					
3.10	Shared Judicial Reception	WA2	200	1	200	
3.11	Shared Judicial Conference Room	CF4	300	1	300	
3.12	Shared Kitchenette	SS2	80	1	80	
3.13	Staff Toilet	TO2	50	2	100	
3.14	Public Toilet	TO1	50	1	50	
	Sub-total				**730**	

Notes:

Two Special Appeals judges and one Appeals Judge.

Space No.	Component	Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
	Appellate Chamber Staff Space					
3.15	Judge	OF4	300	3	900	
3.16	Judge's Toilet	TO2	50	3	150	
3.17	Secretary / Reception	WA2	200	3	600	
3.18	Law Clerk	OF1	120	6	720	
	Sub-total				**2,370**	
	Appellate Chamber Support Space					
3.19	Copier and Supply Storage	OS1	80	3	240	1 per chamber suite
3.20	File: Lateral Cabinet	OS3	9	3	27	3 per chamber suite
3.21	File: Open Shelving	OS3	9	42	378	6 units (126 LF) per chamber suite
3.22	Coat Closet	ST3	15	3	45	1 per chamber suite
3.23	Kitchenette	SS2	40	1	40	1 shared
	Sub-total				**730**	
	Visiting Judge's Suite					
3.24	Visiting Judge	OF2	240	3	720	
3.25	Judge's Toilet	TO2	50	1	50	shared
3.26	Staff Attorney	OF1	150	1	150	locate with Visiting Judges
3.27	Intern	WS2	36	1	36	workstations in office
3.28	Copier	OS1	40	1	40	
3.29	File: Lateral Cabinet	OS3	9	3	27	
3.30	Coat Closet	ST3	15	1	15	
	Sub-total				**1,038**	
Total Net Square Feet (NSF)					**11,924**	

4. Magistrates

Space No.	Component	Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
	Staff Space					
4.01	Magistrate	OF4	240	3	720	
4.02	Magistrate's Toilet	TO2	50	3	150	
4.03	Admin. Assistant/ Reception	WS3	150	3	450	
	Sub-total				**1,320**	
	Support Space					
4.04	Shared Meeting Room	CF2	150	1	150	accom. 5-6 people
4.05	Copier	OS1	40	1	40	shared
4.06	Supply Storage	ST1	60	1	60	shared
4.07	File: Lateral Cabinet	OS3	9	9	81	3 per chamber suite
4.08	File: Open Shelving	OS3	9	18	162	6 units (126 LF) per chamber suite
4.09	Kitchenette	SS2	40	1	40	shared
4.10	Coat Closet	ST3	15	1	15	shared
	Sub-total				**548**	
Total Net Square Feet (NSF)					**1,868**	

5. Court Administration

Space No.	Component	Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
	Staff Space					
5.01	Court Administrator	OF2	220	1	220	
5.02	Deputy Court Administrator	OF1	165	1	165	
5.03	Fiscal Specialist	OF1	110	2	220	private office, required confidentiality
5.04	Administrative Assistant	WS1	48	3	144	also the Interpreter Coordinator
	Sub-total				**749**	
	Support Space					
5.05	Waiting	WA3	75	0	0	shared with Calendar Management waiting
5.06	Public Counter	CN1	20	0	0	shared with Calendar Management waiting/ counter
5.07	Conference Room	CF2	225	1	225	10 people
5.08	Shared Conference / Training Room	CF6	300	1	300	accom. 20 people, shared by all courts
5.09	Copier	OS1	40	1	40	
5.10	Server Rack	TC3	20	1	20	enclosed
5.11	Supply Storage	ST2	150	1	150	
5.12	Interpreter Equipment Storage	ST1	60	1	60	
5.13	File: Vertical Cabinet	OS3	7	3	21	
5.14	File: Lateral Cabinet	OS3	9	7	63	
5.15	File: Open Shelving	OS3	9	3	27	63 LF of shelving
5.16	Kitchenette	SS2	40	1	40	shared with other components
5.17	Coat Closet	ST3	15	1	15	
	Sub-total				**961**	
Total Net Square Feet (NSF)					**1,710**	

6. Calendar Management

Space No.	Component	Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
	Staff Space					
6.01	Director	OF1	150	1	150	private office
6.02	Criminal Case Manager	WS1	64	2	128	
6.03	Family Technician	WS1	64	2	128	
6.04	Juvenile Specialist	WS1	64	1	64	also Interpreter Coordinator
6.05	IT	WS1	64	2	128	also Juvenile/Criminal Case Manager
6.06	Civil Case Manager	WS1	64	1	64	
6.07	File Manager	WS1	48	1	48	
	Sub-total				**710**	
	Support Space					
6.08	Waiting	WA3	75	1	75	5 people seated, can be shared
6.09	Public Counter	CN1	20	1	20	
6.10	Copier	OS1	40	1	40	
6.11	Server Room	TC2	100	1	100	enclosed
6.12	IT Workspace	TC4	60	1	60	
6.13	IT Storage	ST2	80	1	80	
6.14	Supply Storage	ST2	60	1	60	
6.15	File: Open Shelving	OS3	9	1	9	21 LF of shelving
6.16	Coffee Station	OS1	20	1	20	
6.17	Coat Closet	ST3	15	1	15	
	Sub-total				**479**	
Total Net Square Feet (NSF)					**1,189**	

7. Family Law

Space No.	Component	Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
	Staff Space					
7.01	Family Coordinator	WS1	80	1	80	
7.02	Family Technician	WS1	64	4	256	
7.03	Permanency Planning Liaison	WS1	64	1	64	
7.04	Court Social Worker	OF1	150	2	300	private office, confidentiality, 3 guest chairs
7.05	Juvenile Court Reporter	WS1	48	1	48	
	Sub-total				**748**	
	Support Space					
7.06	Waiting	WA3	60	1	60	4 people seated, can be shared
7.07	Public Counter	CN2	20	1	20	
7.08	Form Review Table	WA3	80	1	80	
7.09	Interview Room	CF3	120	1	120	accom. 4 people
7.10	Conference Room	CF2	150	1	150	6 users
7.11	Copier	OS1	40	1	40	
7.12	Supply Storage	ST2	60	1	60	
7.13	File: Lateral Cabinet	OS3	9	3	27	
7.14	File: Open Shelving	OS3	9	2	18	42 LF of shelving
7.15	Coffee Station	OS1	20	1	20	
7.16	Coat Closet	ST3	15	1	15	
	Sub-total				**610**	
Total Net Occupiable Square Feet (NSF)					**1,358**	

8. Clerk of the Courts

Space No.	Component	Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
	Clerk Staff Space					
8.01	Clerk of the Circuit Court	OF2	240	1	240	
8.02	Clerk of the Circuit Court's Toilet	TO2	50	1	50	
8.03	Chief Deputy	OF1	165	1	165	
8.04	Admin. Assistant	OF1	110	1	110	
8.05	Fiscal Clerk	OF1	110	1	110	
8.06	Civil Manager	OF1	100	1	100	private office
8.07	Criminal / Juvenile Manager	OF1	100	1	100	private office
8.08	Civil Supervisor	WS1	64	1	64	
8.09	Criminal / Juvenile Manager Supervisor	WS1	64	1	64	
8.10	Civil Clerk	WS1	48	15	720	
8.11	Criminal / Juvenile Clerk	WS1	48	12	576	1 additional courtroom clerk per new judge
	Sub-total				**2,299**	
	Land Records / Licensing Staff Space					
8.12	Land Records / License Manager	OF1	100	1	100	
8.13	Land Records / License Supervisor	WS1	64	1	64	
8.14	Land Records / License Clerk	WS1	48	9	432	
	Sub-total				**596**	

Space No.	Component	Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
	Clerk Support Space					
8.15	Waiting	WA3	300	1	300	20 people seated
8.16	Children's Play Area	WA4	50	1	50	
8.17	Public Counter	CN2	20	6	120	2 Civil, 1 Criminal/Juvenile, 3 Land Records/ Licensing
8.18	Public Form Counter	WA3	20	3	60	
8.19	Public Computer Kiosks	WA5	20	4	80	
8.20	Work Room / Interview Room	CF3	100	1	100	public work room, confidential interviews
8.21	Land Use Book Storage	ST2	30	1	30	
8.22	Title Search Bins	WA3	30	1	30	
8.23	Public Copier	OS1	20		0	
8.24	Marriage Ceremony Space	OT1	300	1	300	
8.25	Marriage Waiting	WA3	75	1	75	5 people seated, adjacent to general waiting area
8.26	Conference Room	CF2	225	1	225	accom. 10 people
8.27	Exhibit Room	ST2	350	1	350	
8.28	Staff Copier / Office Equip. Room	OS2	150	1	150	copier, scanners, plotter, shredder
8.29	Staff Copier / Printer	OS1	30	1	30	
8.30	Tech. Closet	TC2	40	1	40	enclosed
8.31	Mail Room	MA1	180	1	180	
8.32	Supply Storage	ST2	120	1	120	
8.33	Safe	OS1	15	1	15	
8.34	Clerk Files: Lateral Cabinet	OS3	9	6	54	secure cabinets
8.35	Clerk Files: Open Shelving	OS3	9	210	1890	
8.36	Land / License Files: Vertical Cabinet	OS3	7	6	42	secure cabinets
8.37	Land / License File: Open Shelving	OS3	9	15	135	
8.38	Kitchenette	SS2	40	1	40	
8.39	Break Room	SS1	150	1	150	
8.40	Coat Closet	ST3	10	2	20	
	Sub-total				**4,386**	
Total Net Square Feet (NSF)					**7,281**	

Notes:

If the Clerk area offices are co-located on the same floor, support spaces can be combined or consolidated. If Clerk area offices are on separate floors, support spaces must be different. Support spaces are as follows: Waiting, Children's Play Area, Public Counter, Public Form Counter, Public Kiosks, Public Copier, Conference Room, Mail Room, Copier, Server Rack, Scanner, Supply Storage, Files, Kitchenette, Break Room, Coat Closets

9. Register of Wills

Space No.	Component		Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
	Staff Space						
9.01	Register of Wills		OF2	240	1	240	
9.02	Register of Wills' Toilet		TO2	50	1	50	
9.03	Chief Deputy		OF1	165	1	165	
9.04	Deputy		WS1	64	7	448	accom. 2-3 guest chairs
9.05	Auditor		WS1	48	5	240	accom. 1 guest chair
		Sub-total				**1,143**	
	Support Space						
9.06	Waiting		WA3	45	1	45	3 people
9.07	Public Counter		CN1	20	1	20	
9.08	Public Kiosks		WA5	20	2	40	
9.09	Interview Room		CF3	120	1	120	
9.10	Conference Room		CF2	225	1	225	8-10 people, can be shared
9.11	Supply Storage		ST1	60	1	60	
9.12	Copier		OS1	40	1	40	
9.13	Mail Processing		MA2	60	1	60	
9.14	Fireproof File Storage		OS3	10	13	130	wills retention
9.15	File: Vertical Cabinet		OS3	7	27	189	
9.16	File: Lateral Cabinet		OS3	9	3	27	
9.17	File: Open Shelving		OS3	9	1	9	21 LF
9.18	Kitchenette		SS2	40	1	40	
9.19	Coat Closet		ST3	15	1	15	
		Sub-total				**1,020**	
Total Net Square Feet (NSF)						**2,163**	

10. Orphan's Court

Space No.	Component	Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
	Courtroom Space					
10.01	Courtroom	HR2	950	1	950	needs to accommodate 3-judge panel
10.02	Courtroom Vestibule	VS1	75	1	75	
10.03	Courtroom Waiting	WA1	180	1	180	12 sf. per person, 15 persons waiting
10.04	AV Closet	TC1	40	1	40	enclosed
10.05	Attorney/Client Interview Rm	CF1	100	2	200	
10.06	Judge's Conference Room	CF4	225	1	225	
10.07	Judge's Toilet	TO2	50	1	50	
	Staff Space					
10.08	Shared Office	OF1	150	1	150	accom. 3 desks
10.09	Administrative Assistant	WS1	48	1	48	
10.10	Intern	WS2	36	2	72	
	Support Space					
10.11	Waiting Area	WA3	30	1	30	
10.12	Supply Storage	ST2	40	1	40	
10.13	Copier	OS1	40	1	40	
10.14	Kitchenette	SS2	40	1	40	
10.15	Coat Closet	ST3	15	1	15	
	Sub-total				**2,155**	support space to be shared with Register of Wills
Total Net Square Feet (NSF)					**2,155**	

11. Court Reporters

Space No.	Component	Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
	Staff Space					
11.01	Supervisory Court Reporter	OF1	135	1	135	
11.02	Full Time Court Reporter	WS1	48	5	240	growth with each additional judge
11.03	Contingents' Shared Workstation	WS1	48	1	48	shared between 8 contingents / staff
	Sub-total				**423**	
	Support Space					
11.04	Conference Area	CF2	225	1	225	for contingent staff
11.05	Staff Lockers	OS2	42	1	42	for contingent staff; 12 half height lockers
11.06	Copier	OS1	40	1	40	
11.07	Supply Storage	ST2	60	1	60	
11.08	File: Vertical Cabinet	OS3	7	2	14	
11.09	File: Lateral Cabinet	OS3	9	6	54	files expected to decrease
11.10	File: Open Shelving	OS3	9	2	18	42 LF of shelving
11.11	Coat Closet	ST3	15	1	15	
	Sub-total				**468**	
Total Net Square Feet (NSF)					**891**	

12. Law Library

Space No.	Component	Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
	Staff Space					
12.01	Librarian's Office	OF1	135	1	135	
	Sub-total				**135**	
	Support Space					
12.02	Circulation Desk	LB1	80	1	80	contains duress alarm
12.03	Conference Room	CF2	150	1	150	5-6 users
12.04	Computer Kiosk	LB2	20	6	120	
12.05	Work Table	LB2	80	3	240	
12.06	Listening Station	LB4	20	1	20	for court reporter transcripts
12.07	Study Carrel	LB3	25	4	100	
12.08	Copier	OS1	40	2	80	1 public, 1 staff
12.09	Supply Storage	ST2	60	1	60	
12.10	File: Vertical Cabinet	OS3	7	5	35	
12.11	File: Lateral Cabinet	OS3	9	2	18	
12.12	Stacks: Open Shelving	LB5	9	25	225	225 LF of shelving
12.13	Attorney Lounge	OT2	200	1	200	
	Sub-total				**1,328**	
Total Net Square Feet (NSF)					**1,463**	

13. Jury Assembly

Space No.	Component	Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
	Juror Space					
13.01	Jury Assembly Waiting Room	JA1	12	200	2,400	12 sf. per person
13.02	Jury Assembly Public Counter	CN1	100	1	100	
13.03	Jury Assembly Lounge	JA2	200	1	200	
13.04	Kitchenette	SS2	40	1	40	
13.05	Vending Area	OT3	80	1	80	
13.06	Public Toilet	TO1	150	2	300	
13.07	Wellness Room	OT4	80	1	80	
13.08	Coat Room	ST3	120	1	120	
	Sub-total				**3,320**	
	Staff Space					
13.09	Shared Office	OF1	250	1	250	Jury Commissioner and ADR
13.10	Bailiff Lockers	SS2	6	10	60	
	Sub-total				**310**	
	Support Space					
13.11	Mail Processing	MA2	100	1	100	
13.12	Copier	OS1	40	1	40	
13.13	Storage	ST2	60	1	60	
13.14	File: Vertical Cabinet	OS3	7	3	21	
13.15	File: Lateral Cabinet	OS3	9	1	9	
13.16	File: Open Shelving	OS3	9	1	9	21 LF
13.17	Coat Closet	ST3	15	1	15	
	Sub-total				**254**	
Total Net Square Feet (NSF)					**3,884**	

Note: not on ground floor

14. Sheriff

Space No.	Component	Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
	Staff Space					
14.01	Sheriff	OF2	240	1	240	
14.02	Sheriff's Toilet	TO2	50	1	50	
14.03	Sheriff's Admin. Asst / Reception	OF1	110	1	110	
14.04	Chief Deputy	OF1	165	1	165	
14.05	Chief Deputy toilet	TO2	50	1	50	
14.06	Fleet / K-9 / Quartermaster	OF1	110	2	220	adjacent to K-9 animal holding
14.07	Education & Training	OF1	110	1	110	
14.08	Executive Officer	OF1	165	1	165	
14.09	Administrative Aide	OF1	100	1	100	
14.10	Administrative Services	OF1	300	2	600	
14.11	Landlord Technician	OF1	110	1	110	
14.12	Research and Planning	OF1	110	1	110	
14.13	Field Operations	OF1	165	1	165	
14.14	Warrants Sergeant	OF1	110	1	110	
14.15	Warrants Corporal	OF1	100	1	100	
14.16	Warrants	WS1	48	6	288	
14.17	Landlord Tenant Sergeant	OF1	110	1	110	
14.18	Landlord / Tenant Corporal	WS1	64	3	192	
14.19	Landlord / Tenant	WS1	48	5	240	
14.20	Domestic Violence Sergeant	OF1	110	1	110	
14.21	Domestic Violence	WS1	48	14	672	
14.22	Court Services Lieutenant	OF1	165	1	165	
14.23	Duty Officer / Cashier / Reception	OF1	100	1	100	Public reception window within the office
14.24	Transport & Security	WS1	64	1	64	
14.25	Patrol	OF1	110	1	110	
14.26	Courthouse Deputies	WS1	48	25	1,200	Courthouse Deputies shall be one large space
14.27	Courthouse Sergeant	OF1	100	1	100	
	Sub-total				**5,756**	
	Support Space					
14.28	Waiting	WA3	100	1	100	
14.29	Staff Lockers	SS3	100	1	100	8 lockers
14.30	Conference Room	CF2	225	1	225	8-10 people
14.31	Copier	OS1	40	2	80	
14.32	Server Rack	TC2	20	2	40	enclosed
14.33	Supply Storage	ST1	150	1	150	
14.34	Quartermaster Storage	ST2	450	1	450	uniform storage
14.35	Gun Safe	SF1	60	1	60	
14.36	Armory	ST4	100	1	100	
14.37	Property Room	ST5	1,000	1	1,000	
14.38	Evidence Room	ST5	400	1	400	
14.39	K-9 Animal Holding Facility	SF3	200	1	200	canines, sink, storage cabinet, with exterior access
14.40	File: Vertical Cabinet	OS3	7	3	21	
14.41	File: Lateral Cabinet	OS3	9	3	27	
14.42	File: Open Shelving	OS3	9	3	27	
14.43	Kitchenette	SS2	40	1	40	adjacent to break room
14.44	Break Room	SS1	200	1	200	accom. 10 people
14.45	Staff Toilet	TO2	50	2	100	
14.46	Coat Closet	ST3	15	2	30	
	Sub-total				**3,350**	

Space No.	Component	Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
	Court Services					
14.47	Officer Waiting Area	WA3	200	1	200	seating for 12 officers, coffee station
14.48	Control Room	SF4	300	1	300	2 workstations, monitors, door control
14.49	Security Equipment Room	ST5	100	1	100	includes radios, restraints, other equip.
14.50	Control Room Toilet	TO2	50	1	50	adjacent to control room
14.51	Duty Officer	OF1	100	1	100	adjacent to control room
14.52	Muster Room	CF7	800	1	800	accom. 25 people for mustering
14.53	Training Office	OF1	135	1	135	
14.54	Kitchenette	SS2	40	1	40	adjacent to muster room
14.55	Lockers - Male	SS3	12	60	720	assume 75% male
14.56	Staff Toilets / Shower	TO3	180	1	180	4 toilets/urinals, 2 showers
14.57	Lockers - Female	SS3	12	20	240	assume 25% female
14.58	Staff Toilets / Shower	TO3	120	1	120	2 toilets, 1 shower
	Sub-total				**2,985**	
	Court Services - Central Holding					
14.59	Vehicular Sally Port	SF1	800	1	800	2 large vans, enclosed
14.60	Gun Locker	SF1	20	1	20	located in the vehicular sally port
14.61	Gun Station	SF1	20	1	20	located in the vehicular sally port, gun unloading
14.62	Transport Equipment Storage	ST5	20	1	20	located in the vehicular sally port, restraints, gloves, etc.
14.63	Pedestrian Sally Port	VS4	150	1	150	accom. up to 8 in-custodies at one time with security screening
14.64	Processing Counter	SF5	150	1	150	accom. 3-4 staff, in=-custody intake/processing
14.65	Control Room	SF4	200	1	200	out of view of detainees
14.66	Property Storage	SF6	20	1	20	in-custodies off the street
14.67	Search Alcove	SF7	40	1	40	
14.68	Adult Holding - Group Male	HO1	120	3	360	accom. up to 6 in-custodies, wet cell
14.69	Adult Holding - Group Female	HO1	90	1	90	accom. up to 4 in-custodies, wet cell
14.70	Adult Holding - Single Occupancy	HO1	60	4	240	wet cell, special classification or female
14.71	Juvenile Holding - Group	HO1	90	2	180	accom. up to 4 in-custodies, wet cell
14.72	Juvenile Holding - Single Occupancy	HO1	60	4	240	wet cell, special classification or female
14.73	Lunch Storage	SF8	20	1	20	refrigerator, counter / sink, in-custodies' lunches
14.74	Non-Contact Visitation, ADA	SF9	60	1	60	
14.75	Non-Contact Visitation	SF9	40	3	120	
14.76	Visitor Waiting Area	WA6	60	1	60	4 seats
14.77	Eye Wash Station	TO5	20	1	20	
14.78	Emergency Shower	TO5	40	1	40	
	Sub-total				**2,850**	
Total Net Square Feet (NSF)					**14,941**	

15. State's Attorney

Space No.	Component	Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
	Staff Space					
15.01	State's Attorney's Office	OF2	240	1	240	
15.02	Deputy State's Attorney's office	OF1	165	2	330	
15.03	Attorney Office / Admin. Office	OF1	110	44	4,840	
15.04	Workstation Type 2	WS1	64	19	1,216	
15.05	Workstation Type 1	WS1	48	26	1,248	
	Sub-total				**7,874**	
	Support Space					
15.06	Public Waiting	WA3	60	1	60	4 people seated
15.07	Public Counter	CN2	20	1	20	
15.08	Victim / Witness Waiting	WA3	300	1	300	20 people seated; juvenile & adult waiting
15.09	Conference Room	CF2	225	1	225	10 people
15.10	Conference Room - Large	CF2	350	1	350	15 people
15.11	Library	LB5	350	1	350	
15.12	Interview Room	CF3	100	3	300	
15.13	Mail Room	MA1	100	1	100	
15.14	Copier	OS1	40	5	200	
15.15	Server Closet	TC2	40	3	120	enclosed
15.16	Scanner	OS1	40	2	80	
15.17	Supply Storage	ST2	60	2	120	
15.18	Evidence Storage	ST5	100	1	100	
15.19	File: Vertical Cabinet	OS3	7	30	210	separate juvenile records
15.20	File: Lateral Cabinet	OS3	9	30	270	separate juvenile records
15.21	Kitchenette	SS2	40	1	40	
15.22	Break Room	SS1	150	1	150	
15.23	Coat Closet	ST3	15	2	30	
	Sub-total				**3,025**	
	Grand Jury Space					
15.24	Grand Jury Hearing Room	HR3	700	1	700	23 jurors
15.25	Vestibule	VS2	50	1	50	
15.26	Security Station	OT6	50	1	50	
15.27	Witness Waiting Room	WA7	100	1	100	
15.28	Coat Closet	ST3	15	1	15	
15.29	Kitchenette	SS2	40	1	40	
15.30	Public Toilet	TO1	50	2	100	
15.31	Storage	ST1	60	1	60	
	Sub-total				**1,115**	
Total Net Square Feet (NSF)					**12,014**	

16. Public Defender

Space No.	Component	Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
	Staff Space					
16.01	Satellite Office	OF3	165	1	165	workstations, office equipment
16.02	Conference Room	CF2	150	2	300	6 people
16.03	File: Lateral Cabinet	OS3	9	4	36	
	Sub-total				**501**	
Total Net Square Feet (NSF)					**501**	

17. Department of Juvenile Services

Space No.	Component	Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
	Staff Space					
17.01	County Supervisor	OF1	150	1	150	
17.02	Deputy County Supervisor	OF1	120	2	240	
17.03	Probation After Care Worker	OF1	120	10	1,200	3 guest chairs in each office
17.04	Court Liaison	OF1	120	2	240	3 guest chairs in each office
17.05	Intake Worker	OF1	120	2	240	3 guest chairs in each office
17.06	Investigator	OF1	120	1	120	3 guest chairs
17.07	Support Staff	WS1	64	3	192	Secretaries, Administrative Aides
	Sub-total				**2,382**	
	Support Space					
17.08	Waiting	WA3	225	1	225	seating for 15
17.09	Children's Play Area	WA4	80	1	80	includes seats for supervision and toilet
17.10	Public Service Counter	CN2	80	1	80	counter with queuing for 5 people, window with controlled door access to staff area
17.11	Drug Testing Toilet Room	TO4	60	1	60	
17.12	Conference Room	CF2	240	1	240	accom. 12 people
17.13	Small Conference Room	CF2	150	2	300	accom. 6 people
17.14	Shared Workstations	WS2	36	6	216	computer station, phone, used by related outside agencies
17.15	Copier	OS1	40	1	40	
17.16	Server Closet	TC2	20	1	20	enclosed
17.17	Supply Storage	ST1	60	1	60	
17.18	GPS Equipment Storage	ST2	20	1	20	electronic monitoring equipment
17.19	File: Vertical Cabinet	OS3	7	4	28	
17.20	File: Lateral Cabinet	OS3	9	4	36	
17.21	File: Open Shelving	OS3	9	4	36	located in a lockable room
17.22	Kitchenette	SS2	40	1	40	
17.23	Coat Closet	ST3	10	2	20	
	Sub-total				**1,501**	
Total Net Square Feet (NSF)					**3,883**	

Notes:

Program assumes use of shared space in the courthouse for juvenile evening and weekend programs.

18. Department of Social Services

Space No.	Component	Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
	Staff Space					
18.01	Supervisor Office	OF1	100	1	100	
18.02	Shared Office	OF1	100	1	100	workstation, also used for DNA testing
18.03	Shared Workstations	WS1	48	2	96	
	Sub-total				**296**	
	Support Space - Office					
18.04	Waiting	WA3	45	1	45	seating for 3, locate with public counter
18.05	Public Counter	CN2	20	1	20	includes under-counter safe for payment collection
18.06	Copier	OS1	40	1	40	
18.07	Server Closet	TC2	40	1	40	enclosed
18.08	Supply Cabinet	OS3	15	1	15	office supplies
18.09	File: Lateral Cabinet	OS3	9	6	54	
18.10	Coffee Station	OS1	20	1	20	
18.11	Coat Closet	ST3	10	1	10	
	Sub-total				**244**	
	Support Space - Near Courtrooms					
18.12	Courtroom Waiting	WA1	60	1	60	near courtrooms, seating for 4
18.13	Children's Play Area	WA4	30	1	30	near courtrooms, adjacent to waiting
18.14	Small Workstation	WS2	25	1	25	adjacent to waiting
18.15	Conference Room	CF2	225	1	225	8-10 users, one near courtrooms
	Sub-total				**340**	
Total Net Square Feet (NSF)					**880**	

19. Bar Association

Space No.	Component	Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
19.01	Attorney Lounge	SS1	225	1	225	
19.02	Conference / Mediation	CF2	225	1	225	
19.03	Copier	OS1	40	1	40	
19.04	Supply Storage	ST2	60	1	60	
19.05	Coat Closet	ST3	15	1	15	
	Sub-total				**565**	
Total Net Square Feet (NSF)					**565**	

20. Building Support

Space No.	Component	Room Data	Unit SF	Space Requirement Qty.	NSF	Comments
20.01	Public Entrance Vestibule	VS5	150	1	150	
20.02	Queuing	BS1	12	100	1,200	12 sf. per person
20.03	Security Screening	BS2	100	3	300	
20.04	Security Office / Command Rm	SF2	200	1	200	12 gun lockers
20.05	Security Office Storage	ST5	60	1	60	
20.06	Central Mail Room	MA1	200	1	200	
20.06A	Eye Wash Station	TO5	20	1	20	in Central Mail
20.07	Maintenance Staff Office	OF3	100	1	100	
20.08	Public Lobby	BS3	2,500	1	2,500	
20.09	Public Family Toilet	TO2	60	4	240	quantities may very, min. 1 per floor
20.10	Staff Toilet	TO2	150	2	300	
20.11	Unisex Staff Toilet	TO2	50	2	100	added
20.12	Janitor's Closet	BS4	60	4	240	quantities may vary, min. 1 per floor
20.13	Telecom Closet	BS5	80	8	640	quantities may vary, min. 1 per floor as required
20.14	Electrical Closet	BS6	80	8	640	quantities may vary, min. 1 per floor as required
20.15	Security Closet	BS7	80	8	640	quantities may vary, min. 1 per floor as required
20.16	Media Room	OT7	150	2	300	one of the mroom is for evidence viewing
20.17	Maintenance Shop / Storage	BS8	300	1	300	
20.18	Maintenance Toilet	TO2	50	1	50	
20.19	Housekeeping Storage	ST6	300	1	300	
20.20	Bulk Storage	ST6	500	1	500	
20.21	Loading / Receiving	BS9	600	1	600	
20.22	Trash Room	BS10	400	1	400	
20.23	Recycling	BS11	200	1	200	
20.24	Wellness Room	OT4	80	1	80	staff access
20.25	Multipurpose Room	CF6	800	1	800	
20.26	Bike Storage					deleted
20.27	Staff Shower					deleted
20.28	Fitness Room	SS4	500	1	500	accessible from secure circulation
20.29	Male Locker Room	SS3	100	1	100	8 lockers, adjacent to fitness room
20.30	Female Locker Room	SS3	100	1	100	8 lockers, adjacent to fitness room
20.31	Male Toilet / Shower	TO3	100	1	100	adjacent to male locker room; 1 toilet and 1 shower
20.32	Female Toilet / Shower	TO3	100	1	100	adjacent to female locker room; 1 toilet and 1 shower
	Sub-total				**11,960**	
	Cafeteria					
20.33	Serving Line	BS12	800	1	800	
20.34	Prep Kitchen	BS13	300	1	300	
20.35	Kitchen	BS14	600	1	600	
20.36	Indoor Seating	BS15	1,620	1	1,620	Provide public toilet as required by code
20.37	Outdoor Seating		600	1		not included in building NSF
	Sub-total				**3,320**	
Total Net Square Feet					**15,280**	

Notes:
Public toilet not included in NSF. Provide for Toilet Rooms in existing Cafeteria SF.

1.2 Room Data Schedule

Room data sheets are organized by major departmental spaces and are intended to identify finishes, doors, windows, HVAC, fire protection, electrical power and lighting, plumbing, AV/telecommunications, casework and electronic security characteristics outside of construction. Major departmental spaces included in the room data sheets include the following:

- Courtrooms/Hearing Rooms
- Jury Assembly
- Waiting Areas
- Vestibules
- Public Counters
- Offices
- Open Workstations
- Conference/Meeting Rooms
- Office Support spaces
- Staff Support spaces
- Toilet Room
- Library Special spaces
- Special Sheriff spaces
- Holding Cells
- Mail Processing/Sorting
- Technology spaces
- Storage spaces
- Building Support spaces
- Other spaces

The room data sheets include a “Room Data Code,” which is referenced in the detailed space program tables under the “Room Data” column for each program component. The room data sheets are meant to be a reference for the design team throughout the design and construction process. The sheets contain the detailed, technical material of each space planned for the facility. For the most part, these data sheets represent typical conditions in similar rooms across each functional component. In addition to the room data sheets, section 4.10, “Furniture, Fixtures and Equipment (FF&E),” contains additional detail regarding FF&E.

Additionally sections 5.1-5.5, 7., 8., 9., and 10., discuss in more detail the security, mechanical, electrical, plumbing and fire protection systems required.

Courthouse Room Prioritization

The Room Data Schedule includes ~~room~~ prioritization to apply if an Unavailability Event occurs. For further details on room prioritizations, Unavailability Events and the related deductions that may be incurred, see Appendix 11 (Deductions) of this Project Agreement

~~*Highest/High Priority*~~

~~The primary purpose of the New Courthouse is to advance the resolution of pending cases. With that goal in mind, the spaces critical to that mission fall into the High Priority category, especially if those functions cannot be accomplished at a different location. Some examples of courtrooms with the following functions that have high priority include, but are not limited to:~~

- ~~Ability to hold scheduled cases on any given day~~
- ~~Ability to hold hearings on any given day~~
- ~~Ability of Orphan's Court to hold scheduled hearings~~
- ~~Ability for Register of Wills to conduct public business~~

~~Other factors that bear on the mission are the number of spaces affected and the length of time out of service.~~

~~*Medium Priority*~~

~~Medium priority spaces are spaces where activities could be interrupted for a brief period, and in the event of a prolonged outage, could be provided ad hoc, either in the building or elsewhere. For example, the ability of Judges to use chambers.~~

~~*Low/Lowest Priority*~~

~~Spaces which, if unavailable for a length of time, do not impede the primary mission of the courthouse.~~

~~**Humidity Range**~~

~~All spaces must be maintained within a 30-50% humidity range~~.

Room Data Codes: **BS1, BS2**

Program Component: Queuing, Security Screening

General	**Min. Ceiling Height:**	16'-0"	**Notes:**	Accessible
	Acoustic:			
	Prioritization:	High-		
Finishes	**Base:**	Terrazzo	**Notes:**	Provide accessible walk through magnetometer and x-ray.
	Floor:	Terrazzo		
	Wall:	Wood, Stone, Porcelain Tile		
	Ceiling:	Wood, Acoustical Panel, Gypsum Board-paint		
Doors	**Door Type:**	Storefront	**Sidelight:**	No
	Door Material:	Aluminum	**Glazing:**	Insulated, clear
	Hardware:	Commercial	**Notes:**	Two sets of double doors, glazed wall system, ADA push plate; card reader for off-hours access.
	Frame:	Aluminum		
Windows	**Frame:**	Aluminum	**Glazing:**	Insulated, clear, ballistic glazing min. 8'-0" high
	Pass-Through:		**Notes:**	Natural daylight clear sightline to exterior preferred
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	BS1: (2) Duplex-Normal power BS2: (6) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	BS2: 120V dedicated security equipment receptacle on the floor.
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	40 fc	**Lighting Control:**	Control Panel and Central Control
	Fixture Type:	Recessed / Surface / Pendant	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:	No		
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	Yes
	Card Access:	Yes	**Intercom:**	No
	Duress Alarm:	Yes at BS2	**Notes:**	
Furnishing / Fixtures:	Provide flexibility for queuing line; refer to Sections 4.10 for further detail.			
Equipment:				
Other Notes:	BS1, BS2: Level 2 ballistic glazing min. 8'-0" high separate from the lobby.			

Room Data Codes:	**BS3**			
Program Component:	Public Lobby			
General	**Min. Ceiling Height:**	16'-0"	**Notes:**	Accessible
	Acoustic:			
	Prioritization:	High.		
Finishes	**Base:**	Terrazzo	**Notes:**	Provide Information Counter, digital dockets.
	Floor:	Terrazzo		
	Wall:	Wood, Stone, Porcelain Tile		
	Ceiling:	Wood, Acoustical Panel, Gypsum Board-paint		
Doors	**Door Type:**	Storefront	**Sidelight:**	No
	Door Material:	Aluminum	**Glazing:**	Insulated
	Hardware:	Commercial	**Notes:**	Two sets of double doors; security glazing; push plate for ADA access.
	Frame:	Aluminum		
Windows	**Frame:**	Aluminum	**Glazing:**	Clear
	Pass-Through:		**Notes:**	Natural daylight preferred.
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(4) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	40 fc	**Lighting Control:**	Control Panel and Central Control
	Fixture Type:	Recessed / Surface / Pendant	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:	No		
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	Yes	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**	Information Counter Millwork	**Notes:**	
	Material:	Wood, Stone, Solid Surfacing		
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	Yes at wall separating screening and lobby
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Provide flexibility for queuing line; refer to Sections 4.10 for further detail. Provide digital dockets and digital building directory at the public lobby.			
Equipment:				
Other Notes:	Level 2 ballistic glazing min. 8'-0" high required at lobby glass facing exterior.			

Room Data Codes:	**BS4**			
Program Component:	Janitor's Closet			
General	**Min. Ceiling Height:**	9'-0"	**Notes:**	
	Acoustic:			
	Prioritization:	Lowest		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	Provide min 2'-0" FRP protection above floor, fixtures and MOP basins.
	Floor:	Sealed Concrete		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	No
	Door Material:	Wood	**Glazing:**	
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	Provide exhaust
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(1) Duplex-GFCI	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	20 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Surface, Recessed	**Notes:**	
Plumbing	**Fixture Material:**	Commercial	**Water Management:**	No
	Fixture Type:	Mop Sink	**Notes:**	
	Accessible:	No		
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Provide flexibility for queuing line; refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes:	**BS5,BS6, BS7**			
Program Component:	Telecom Closet, Electrical Closet, Security Closet			
General	**Min. Ceiling Height:**	9'-0"	**Notes:**	
	Acoustic:			
	Prioritization:	High		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	Provide plywood backing in wall.
	Floor:	Resilient Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	No
	Door Material:	Wood	**Glazing:**	
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	Yes
	Cooling:	72-76oF	**Notes:**	
	Schedule:	24/7		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(6) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Direct-Indirect Surface	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	Yes
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	BS7 requires Card Access.
Furnishing / Fixtures:	Provide flexibility for queuing line; refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes: **BS8**
Program Component: Maintenance Shop, Storage

General	**Min. Ceiling Height:**		**Notes:**	
	Acoustic:			
	Prioritization:	Lowest.		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Sealed Concrete		
	Wall:	Gypsum Board-paint		
	Ceiling:	Exposed to structure		
Doors	**Door Type:**	Double 36" Swing Door	**Sidelight:**	No
	Door Material:	Hollow Metal	**Glazing:**	
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	78-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	Provide exhaust
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(6) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Surface / Pendant	**Notes:**	
Plumbing	**Fixture Material:**	Commercial	**Water Management:**	
	Fixture Type:	Hand sink eyewash	**Notes:**	
	Accessible:			
AV /Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	Yes
	Card Access:	Yes	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Provide flexibility for queuing line; refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes: **BS9**
Program Component: Loading / Receiving

General	**Min. Ceiling Height:**	14'-0"	**Notes:**	Accessible
	Acoustic:			
	Prioritization:	Low.		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Sealed Concrete		
	Wall:	Concrete Masonry Unit-painted		
	Ceiling:	Exposed to structure		
Doors	**Door Type:**	Overhead Coiling	**Sidelight:**	No
	Door Material:	Steel	**Glazing:**	
	Hardware:	Commercial	**Notes:**	
	Frame:	Steel		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:		**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Dry Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(2) Duplex	**Emergency Power:**	
	Voltage:	120V	**Notes:**	Exterior Outlet Box.
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Surface / Pendant	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	Yes
	Card Access:	Yes	**Intercom:**	Yes
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Provide flexibility for queuing line; refer to Sections 4.10, for further detail; Dock Leveler.			
Equipment:				
Other Notes:				

Room Data Codes:	**BS10, BS11**			
Program Component:	Trash Room, Recycling			
General	**Min. Ceiling Height:**	14'-0"	**Notes:**	Accessible
	Acoustic:			
	Prioritization:	Lowest		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Sealed Concrete		
	Wall:	Concrete Masonry Unit-painted		
	Ceiling:	Exposed to structure		
Doors	**Door Type:**	Double 36" Swing Door	**Sidelight:**	No
	Door Material:	Hollow Metal	**Glazing:**	
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Dry Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(4) Duplex	**Emergency Power:**	
	Voltage:	120V	**Notes:**	Exterior Outlet Box.
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Surface / Pendant	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	Floor Drain
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes, at BS10	**Door Position Switch:**	Yes
	Card Access:	Yes	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Provide flexibility for queuing line; refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:	To be located adjacent to loading / receiving.			

Room Data Codes: **BS12**
Program Component: Serving Line

General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:	Standard 45 STC		
	Prioritization:	Low		
Finishes	**Base:**	Terrazzo	**Notes:**	
	Floor:	Terrazzo		
	Wall:	Wood, Stone, Porcelain Tile, Gypsum Board-paint		
	Ceiling:	Acoustical Panel, Wood		
Doors	**Door Type:**	36" Swing	**Sidelight:**	Yes
	Door Material:	Hollow Metal	**Glazing:**	Tempered
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**	Aluminum	**Glazing:**	Insulated
	Pass-Through:		**Notes:**	Natural daylight ~~preferred~~.
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**		**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Direct-Indirect, Recessed, Pendant	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	
	Card Access:		**Intercom:**	
	Duress Alarm:		**Notes:**	
Furnishing / Fixtures:	Provide flexibility for queuing line; refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:	Parti-wall with adjacent courthouse function to be fully grouted CMU partition to the underside of the slab.			

Room Data Codes: **BS13**
Program Component: Prep Kitchen

General	**Min. Ceiling Height:**	13'-0"	**Notes:**	Accessible
	Acoustic:	Standard 45 STC		
	Prioritization:	Low		
Finishes	**Base:**	Quarry Tile	**Notes:**	
	Floor:	Quarry Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	FRP Sanitary Ceiling System		
Doors	**Door Type:**	36" Swing	**Sidelight:**	Yes
	Door Material:	Hollow Metal	**Glazing:**	Tempered
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**	Aluminum	**Glazing:**	Insulated
	Pass-Through:		**Notes:**	~~Natural daylight preferred~~.
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**		**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Direct-Indirect, Recessed	**Notes:**	
Plumbing	**Fixture Material:**	Commercial	**Water Management:**	
	Fixture Type:	Steel Kitchen Sinks	**Notes:**	Floor Drain
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**	Counters, Cabinets	**Notes:**	
	Material:	Stainless Steel		
	Work Surface:			
Electronic Security	**CTV Camera:**		**Door Position Switch:**	
	Card Access:		**Intercom:**	
	Duress Alarm:		**Notes:**	
Furnishing / Fixtures:	Provide flexibility for queuing line; refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:	Parti-wall with adjacent courthouse function to be fully grouted CMU partition to the underside of the slab.			

Room Data Codes: **BS14**
Program Component: Kitchen

General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:	Standard 45 STC		
	Prioritization:	Low.		
Finishes	**Base:**	Quarry Tile	**Notes:**	
	Floor:	Quarry Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	FRP Sanitary Ceiling System		
Doors	**Door Type:**	36" Swing	**Sidelight:**	Yes
	Door Material:	Hollow Metal	**Glazing:**	Tempered
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**	Aluminum	**Glazing:**	Insulated
	Pass-Through:		**Notes:**	~~Natural daylight preferred~~.
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	Exhaust hood-Gas connections for cooking equipment.
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet pipe System	**Notes:**	Hood systems for cooking hood.
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**		**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Direct-Indirect, Recessed	**Notes:**	
Plumbing	**Fixture Material:**	Commercial	**Water Management:**	
	Fixture Type:	Steel Kitchen Sinks	**Notes:**	Floor Drain
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**	Counters, Cabinets	**Notes:**	
	Material:	Stainless Steel		
	Work Surface:			
Electronic Security	**CTV Camera:**		**Door Position Switch:**	
	Card Access:		**Intercom:**	
	Duress Alarm:		**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:	With adjacent courthouse function to be fully grouted CMU partition to the underside of the slab.			

Room Data Codes: **BS15**
Program Component: Indoor Seating

General	**Min. Ceiling Height:**	12'-0"	**Notes:**	Accessible
	Acoustic:	Standard 45 STC		
	Prioritization:	Low		
Finishes	**Base:**	Terrazzo	**Notes:**	
	Floor:	Terrazzo		
	Wall:	Gypsum Board-paint, Wood, Stone, Porcelain Tile		
	Ceiling:	Acoustical Panel, Wood		
Doors	**Door Type:**	36" Swing	**Sidelight:**	Yes
	Door Material:	Hollow Metal	**Glazing:**	Tempered
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**	Aluminum	**Glazing:**	Insulated
	Pass-Through:		**Notes:**	Natural daylight ~~preferred~~.
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(1) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	Power for TV display.
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor/Switch
	Fixture Type:	Direct-Indirect, Recessed	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	
	Card Access:		**Intercom:**	
	Duress Alarm:		**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:	Parti-wall with adjacent courthouse function to be fully grouted CMU partition to the underside of the slab.			

Room Data Codes: **CF1, CF2, CF3**

Program Component: Attorney / Client Conference Room, Staff Conference Meeting, Interview Room

General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:	High 50 STC		
		High- CF2 at Law Library: Conference Room. CF2 at Public Defender: Conference Room. CF2 at Department of Juvenile Services: Small Conference Room.		
		CF3 at Hearing Rooms: Settlement Conference Room. CF3 at Family Law: Interview Room. CF3 at State's Attorney: Interview Room.		
		Medium- CF1 at Court Sets: Attorney/Client Conference Room, Large Attorney/Client Conference Room. CF1 at Hearing Rooms: Attorney/Client Conference Room. CF1 at Orphan's Court: Attorney/Client Interview Room.		
		CF2 at Sheriff: Conference Room. CF2 at Department of Social Services: Conference Room. CF2 at Magistrates: Shared Meeting Room. CF2 at Family Law: Conference Room. CF2 at State's Attorney: Conference Room. CF2 at State's Attorney: Conference Room: Large. CF2 at Clerk of the Courts: Conference Room. CF2 at Register of Wills: Conference Room. CF2 at Court Reporters: Conference Area. CF2 at Department of Juvenile Services: Conference Room. CF2 at Bar Association: Conference/Mediation.		
		CF3 at Clerk of Courts: Work Room/Interview Room. CF3 at Register of Wills: Interview Room.		
	Prioritization:	**Low-** CF2 at Court Administration: Conference Room.		
Finishes	**Base:**	Vinyl Rubber Base / Wood	**Notes:**	
	Floor:	Carpet Tile		
	Wall:	Gypsum Board-paint, Chair rail		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	Yes
	Door Material:	Wood	**Glazing:**	Tempered
	Hardware:	Commercial	**Notes:**	CF3: sidelight at 36".
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	Clear/Translucent
	Pass-Through:		**Notes:**	Borrowed or Direct ~~Natural~~ daylight preferred.
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(4) Duplex-Normal power, Min 1 floor box	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Direct-Indirect	**Notes:**	Multi-Level Dimming
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	Yes
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	Wall mounted monitor.
	Audio Visual:	Yes		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	Settlement Conference Room, Duress Alarm, CTV Camera, Card Reader and Door Position Switch at CF3 where it has a door to staff circulation.
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes:	**CF4, CF5**			
Program Component:	Judicial Conference Room, Jury Deliberation Room			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:	High 50 STC		
		Highest- CF5 at Court Sets: Jury Deliberation Room, Jury Deliberation Room-Civil Court.		
	Prioritization:	Medium: CF4 at Judges: Shared Judicial Conference Room. CF4 at Orphan's Court: Judge's Conference Room.		
Finishes	**Base:**	Vinyl Rubber Base / Wood	**Notes:**	Judicial Conference and Jury Deliberation to have Very High STC 55.
	Floor:	Carpet Tile		
	Wall:	Gypsum Board-paint, Chair rail		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	Yes
	Door Material:	Wood	**Glazing:**	Tempered
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	Clear / Translucent
	Pass-Through:		**Notes:**	Natural daylight preferred.
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(4) Duplex-Normal power, Min 1 floor box	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Direct-Indirect	**Notes:**	Multi-Level Dimming
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	Yes
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	Wall mounted monitor.
	Audio Visual:	Yes		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	Yes	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:	CF5: Small kitchenette with plumbing contains a commercial, accessible sink that does not need water management, small refrigerator.			

Room Data Codes: CF6
Program Component: Conference / Training Room, Multipurpose Room

General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:	High 50 STC		
	Prioritization:	Medium		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	Chair rail
	Floor:	Carpet Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	Yes
	Door Material:	Wood	**Glazing:**	Tempered
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**	Hollow Metal	**Glazing:**	Tempered
	Pass-Through:		**Notes:**	Natural daylight ~~preferred~~.
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(6) Duplex-Normal power, Min 1 Floor Box	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Direct-Indirect	**Notes:**	Multi-Level Dimming.
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	Yes
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	Wall mounted monitor.
	Audio Visual:	Yes		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	Yes
	Card Access:	Yes	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	

Furnishing / Fixtures: Refer to Sections 4.10, for further detail.
Equipment:
Other Notes:

Room Data Codes:	**CF7**			
Program Component:	Muster Room			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:	High 50 STC		
	Prioritization:			
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Vinyl Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	No
	Door Material:	Wood	**Glazing:**	
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	~~Natural daylight preferred~~.
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(6) Duplex Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Direct-Indirect	**Notes:**	Multi-Level Dimming
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	Yes	**Notes:**	
	Audio Visual:	Yes		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	Yes
	Card Access:	Yes	**Intercom:**	No
	Duress Alarm:		**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:	Provide charger station.			

Room Data Codes:	**CN1, CN2**			
Program Component:	Counter Station			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:			
		Highest- CN1 at Jury Assembly: Jury Assembly Public Counter.		
		High- CN1 at Register of Wills: Public Counter.		
		CN2 at Calendar Management: Public Counter. CN2 at Family Law: Public Counter. CN2 at Clerk of Courts: Public Counter. CN2 at State's Attorney: Public Counter. CN2 at Department of Juvenile Services: Public Service Counter.		
	Prioritization:	Medium- CN2 at Department of Social Services: Public Counter.		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Carpet Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**		**Sidelight:**	
	Door Material:		**Glazing:**	
	Hardware:		**Notes:**	
	Frame:			
Windows	**Frame:**	Hollow Metal	**Glazing:**	Tempered
	Pass-Through:	Paper Pass	**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	No
	Cooling:	72-76oF	**Notes:**	
	Schedule:	8 am-6 pm		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	Quad	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	30 fc	**Lighting Control:**	Switch
	Fixture Type:	Recessed / Direct-Indirect	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	Yes	**Notes:**	Camera at public waiting.
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:	·CN2: Glass panel between public and staff. CN2 at Clerk of Courts, Sheriff and Department of Social Services to have ballistic glass with level 2.			

Room Data Codes:	**HO1**			
Program Component:	Holding Cell, Wet			
General	**Min. Ceiling Height:**	9'-0"	**Notes:**	Accessible; requires sound separation from courtrooms.
	Acoustic:			
		Highest- Court Sets: Holding Cell.		
	Prioritization:	High: Hearing Rooms: Holding Cell. Sheriff: Adult Holding-Group Male. Sheriff: Adult Holding-Group Female. Sheriff: Adult Holding-Single Occupancy. Sheriff: Juvenile Holding-Group. Sheriff: Juvenile Holding-Single Occupancy.		
Finishes	**Base:**	Concrete Masonry Unit painted	**Notes:**	Stainless Steel Modesty Panel
	Floor:	Sealed Concrete		
	Wall:	Concrete Masonry Unit painted		
	Ceiling:	Security Plank Ceiling		
Doors	**Door Type:**	Slider	**Sidelight:**	Yes
	Door Material:	Detention Hollow Metal	**Glazing:**	Security
	Hardware:	Detention Hardware	**Notes:**	Food Pass
	Frame:	Detention Hollow Metal		
Windows	**Frame:**	Detention Hollow Metal	**Glazing:**	Security
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	Yes
	Cooling:	72-76oF	**Notes:**	Provide exhaust
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Recessed, anti-ligature institutional style heads		
Electrical - Power	**Outlets:**	N/A	**Emergency Power:**	
	Voltage:		**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Security Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Control Panel and Central Control
	Fixture Type:	Detention Recessed	**Notes:**	
Plumbing	**Fixture Material:**	Detention	**Water Management:**	Yes
	Fixture Type:	Combi Unit (Standard/ADA)	**Notes:**	Floor drain outside of cell.
	Accessible:	Yes		
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	Yes
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail; detention bench (CMU / precast concrete or wall mounted stainless steel), modesty panel.			
Equipment:				
Other Notes:	~~Prioritization Highest - HO1 in Courtset Floor.~~			

Room Data Codes:	**HR1, HR2, HR3**			
Program Component:	Large, Standard, Civil and Orphan's Courtroom, Hearing Room, Grand Jury Hearing Room			
General	**Min. Ceiling Height:**	14'-0"	**Notes:**	Accessible, raised platform for judge, witness and jury
	Acoustic:	Very high-55 STC		
	Prioritization:	Highest- HR1 at Court Sets: Large Courtroom, Standard Courtroom (Type 1 & 2), Civil Courtroom. High- HR2 at Hearing Rooms: Hearing Room. HR2 at Orphan's Court: Courtroom. HR3 at State's Attorney: Grand Jury Hearing Room.		
Finishes	**Base:**	Wood	**Notes:**	Hearing room at 12'-0" Ceiling Height
	Floor:	Carpet Tile		
	Wall:	Wood, Gypsum Board-paint (stone optional behind judge), acoustical treatment		
	Ceiling:	Wood, Gypsum Board-paint, Acoustical Panel		
Doors	**Door Type:**	36" Swing, Double at Entrance	**Sidelight:**	Yes
	Door Material:	Wood	**Glazing:**	Clear / Translucent
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal / Wood		
Windows	**Frame:**	Aluminum	**Glazing:**	Tempered
	Pass-Through:		**Notes:**	Borrowed light or Direct ~~Natural~~ daylight ~~preferred.~~
HVAC	**Heating:**	68-72oF	**Emergency Power:**	One courtroom
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(10) Duplex-Emergency Power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	Power requirement at judge bench, clerk bench, witness stand, court reporter tables, counsel tables, and jury box.
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch / Zoned
	Fixture Type:	Recessed / Direct-Indirect	**Notes:**	Multi-Level Dimming, Multi-zone Control
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	Yes
	Wi-Fi:	Yes		
	MATV:	Yes	**Notes:**	Sound Masking System over Jury Box, Video Conferencing, Signage items shall be required outside each courtroom, Evidence Display Monitors, Microphone at judge's witness, jury and counsel tables. Media connection at Large Courtroom; wi-Fi required.
	Audio Visual:	Yes		
Casework	**Type:**	Custom millwork	**Notes:**	Ballistic lining at judge's, Clerk & Witness benches. Adjustable height counter at judge and clerk bench.
	Material:	Wood		
	Work Surface:	Wood		
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	Yes
	Card Access:	Yes-from staff corridor	**Intercom:**	No
	Duress Alarm:	At judge and clerk	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail; Court seal behind judge, flagpoles.			
Equipment:				
Other Notes:	Master Wireless Clock System.			

Room Data Codes: JA1
Program Component: Jury Assembly Waiting Room

General	**Min. Ceiling Height:**	12'-0"	**Notes:**	Accessible
	Acoustic:	Standard 45 STC		
	Prioritization:	Highest		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Carpet Tile		
	Wall:	Gypsum Board-paint, Wood, Porcelain Tile		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	Yes
	Door Material:	Wood	**Glazing:**	Tempered
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**	Hollow Metal	**Glazing:**	Tempered
	Pass-Through:		**Notes:**	Natural daylight **preferred.**
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	**18**	**Emergency Power:**	No
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Recessed / Direct-Indirect	**Notes:**	Multi-zone Control
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	Yes	**Assistive Listening:**	Yes
	Wi-Fi:	Yes		
	MATV:	Yes	**Notes:**	At least one video outlet connected to the satellite down system and cable television system must be provided.
	Audio Visual:	Yes		
Casework	**Type:**		**Notes:**	Millwork at check-in counter.
	Material:	Wood		
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	Yes, at Staff Counter	**Notes:**	
Furnishing / Fixtures:	Refer to Section 4.10, for further detail; seating area, quiet area, work area and monitor for video equipment, tables, chairs.			
Equipment:				
Other Notes:				

Room Data Codes: JA2
Program Component: Jury Lounge

General	**Min. Ceiling Height:**	12''0"	**Notes:**	Accessible
	Acoustic:	Standard 45 STC		
	Prioritization:	Medium		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Carpet Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	Yes
	Door Material:	Wood	**Glazing:**	Tempered
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**	Hollow Metal	**Glazing:**	Tempered
	Pass-Through:		**Notes:**	Natural daylight preferred.
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(8) Duplex-Normal power	**Emergency Power:**	No
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Direct-Indirect	**Notes:**	Multi-zone Control
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV/Telecom	**Telephone:**	No	**Devices:**	
	Data:	Yes	**Assistive Listening:**	Yes
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Section 4.10, for further detail; seating area, quiet area, work area and monitor for video equipment, tables.			
Equipment:				
Other Notes:				

Room Data Codes: **LB1**
Program Component: Circulation Desk

General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:	Low 35 STC		
	Prioritization:	Low.		
Finishes	**Base:**	Vinyl Rubber Base, Wood	**Notes:**	
	Floor:	Carpet Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**		**Sidelight:**	
	Door Material:		**Glazing:**	
	Hardware:		**Notes:**	
	Frame:			
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	Natural daylight preferred.
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating Hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Direct-Indirect	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**	Millwork	**Notes:**	
	Material:	Wood, solid surfacing		
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	Yes	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes:	**LB2, LB3**			
Program Component:	Library Computer Kiosks, Worktable, Copier			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:			
		High- LB2 at Law Library: Computer Kiosk.		
	Prioritization:	Low- LB2 at Law Library: Work Table. LB3 at Law Library: Study Carrel.		
Finishes	**Base:**	Vinyl Rubber Base / Wood	**Notes:**	LB3: Acoustical treatment between each carrel.
	Floor:	Carpet Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**		**Sidelight:**	
	Door Material:		**Glazing:**	
	Hardware:		**Notes:**	
	Frame:			
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	Natural daylight ~~preferred~~.
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	Copier requires dedicated equipment receptacles.
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Direct-Indirect	**Notes:**	Multi-zone Control
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:	LB2: ~~standing height counter~~ seating height counter for computer kiosks.			

Room Data Codes: **LB4**
Program Component: Listening Station

General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:	High 50 STC		
	Prioritization:	Low.		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Carpet Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**		**Sidelight:**	
	Door Material:		**Glazing:**	
	Hardware:		**Notes:**	
	Frame:			
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	~~Natural daylight preferred.~~
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(1) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	
	Fixture Type:	Direct-Indirect	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	
	Audio Visual:	Yes		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:	Acoustical partitioning between stations.			

Room Data Codes:	**LB5**			
Program Component:	Library Files			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:			
	Prioritization:	Low		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Carpet Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**		**Sidelight:**	
	Door Material:		**Glazing:**	
	Hardware:		**Notes:**	
	Frame:			
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**		**Emergency Power:**	
	Voltage:		**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Direct-Indirect	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes: **MA1, MA2**
Program Component: Central Mail Area, Mail Room, Mail Processing

General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:			
		High- MA1 at Building Support: Central Mail Room.		
		Medium- MA1 at Clerk of the Courts: Mail Room. MA1 at State's Attorney: Mail Room. MA2 at Jury Assembly: Mail Processing.		
	Prioritization:	Low- MA2 at Register of Wills: Mail Processing.		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Vinyl Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	
	Door Material:	Wood	**Glazing:**	
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	Separate HVAC so room can be sealed.
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Direct-Indirect	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes, to MA1	**Door Position Switch:**	Yes
	Card Access:	Yes	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail. Mail Carts at Central Mail Room, sorting tables,			
Equipment:				
Other Notes:	~~MA1: USPS approved mailbox in front and back access.~~ - postage machine. MA1 at Courts of Clerk- letter opening machine, ~~MA2: Mail Sorting Machine, Stamping Machine, Folding Machine.~~			

Room Data Codes: **OF1, OF2, OF3**
Program Component: Enclosed Office

General	**Min. Ceiling Height:**	10'-0"	**Notes:**	
	Acoustic:	Standard 45 STC		
		High- OF1 at Calendar Management: Director. OF1 at Clerk of the Courts: Land Records/License Manager. OF1 at Orphan's Court: Shared Office. OF1 at Sheriff: Field Operations, Domestic Violence Sergeant, Court Services Lieutenant, Duty Officer, Patrol. OF2 at Judges: Visiting Judge. OF2 at Clerk of the Courts: Clerk of the Circuit Court. OF2 at Register of Wills: Register of Wills. OF2 at Sheriff: Sheriff. OF2 at State's Attorney: State's Attorney's Office.		
		Medium- OF1 at Sheriff: Sheriff's Admin. Asst./Reception, Chief Deputy, Fleet/K-9/Quartermaster, Education and Training, Executive Officer, Administrative Aide, Administrative Services, Landlord Technician, Warrants Corporal, Training Office. OF1 at Judges: Law Clerk, Staff Attorney. OF1 at Court Administration: Deputy Court Administrator, Fiscal Specialist. OF1 at Family Law: Court Social Worker. OF1 at Clerk of the Courts: Chief Deputy, Admin. Assistant, Fiscal Clerk, Civil Manager, Criminal/Juvenile Manager. OF1 at Register of Wills: Chief Deputy. OF1 at Court Reporters: Supervisory Court Reporter. OF1 at Law Library: Librarian's Office. OF1 at Jury Assembly: Shared Office. OF1 at State's Attorney: Deputy State's Attorney's Office, Attorney Office. OF1 at Department of Juvenile Services: County Supervisor, Deputy County Supervisor, Probation After Care Worker, Court Liaison, Intake Worker, Investigator. OF1 Department of Social Services: Supervisor Office, Shared Office. OF2 at Court Administration: Court Administrator. OF3 Public Defender; Satellite Office.		
		Low- OF1 at Sheriff: Research and Planning.		
	Prioritization:	**Lowest- OF3 at Building Support: Maintenance Staff Office.**		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Carpet Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	Yes
	Door Material:	Wood	**Glazing:**	Tempered
	Hardware:	Commercial, locking	**Notes:**	Locking-deadbolt thumb lock on inside.
	Frame:	Hollow Metal		
Windows	**Frame:**	Aluminum	**Glazing:**	
	Pass-Through:		**Notes:**	Natural daylight ~~preferred,~~ or borrowed light.
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(4) Duplex -Normal Power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Direct-Indirect	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	See Notes	**Notes:**	All enclosed offices at Judges, Magistrates, Court Admin., Family Law, Calendar Management, Clerk of Courts, Register of Wills, Orphan's Court, Court Reporters, Law Library, Jury Assembly and Sheriff's Assistant / Receptionist have duress alarms.
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:	After-hour access.			

Room Data Codes:	**OF4, OF5**			
Program Component:	Judicial / Magistrate Office and Robing Room			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	
	Acoustic:	Very High 55 STC		
	Prioritization:	High- OF4 at Judges: Judge. OF4 at Magistrates: Magistrate. Medium- OF5 at Court Sets: Robing Room.		
Finishes	**Base:**	Wood	**Notes:**	
	Floor:	Carpet Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	Yes
	Door Material:	Wood	**Glazing:**	Tempered
	Hardware:	Commercial, locking	**Notes:**	Locking-deadbolt thumb lock on inside.
	Frame:	Hollow Metal		
Windows	**Frame:**	Aluminum	**Glazing:**	Insulated
	Pass-Through:		**Notes:**	Natural daylight ~~preferred~~
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(4) Duplex -Normal Power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Direct-Indirect	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	Yes	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:	OF4: After-hours access.			

Room Data Codes: **OS1, OS2**

Program Component: Open, shared office area including Copier, Printer, Supplies, Storage, Scanner, Coffee Station, Safe, Staff Lockers

General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:			
		High: OS1 at Clerk of the Courts: Safe.		
		Medium: OS1 at Judges: Copier. OS1 at Magistrates: Copier. OS1 at Family Law: Copier. OS1 at Clerk of the Courts: Public Copier, Staff Copier/Printer. OS2 at Clerk of the Courts: Staff Copier/Office Equipment Room. OS1 at Register of Wills: Copier. OS1 at Jury Assembly: Copier. OS1 at State's Attorney: Copier, Scanner.		
		Low: OS1 at Sheriff: Copier. OS1 at Department of Juvenile Services: Copier. OS1 at Department of Social Services: Copier. OS1 at Judges: Copier and Supply Storage. OS1 at Court Administration: Copier. OS1 at Calendar Management: Copier. OS1 at Orphan's Court: Copier. OS1 at Court Reporters: Copier. OS1 at Law Library: Copier. Department of Juvenile Services: Copier. Department of Social Services: Copier. Bar Association: Copier.		
	Prioritization:	**Lowest:** OS1 at Department of Social Services: Coffee Station. OS1 at Calendar Management: Coffee Station. OS1 at Family Law: Coffee Station. OS2 at Court Reporters: Staff Lockers. OS1 at Department of Social Services: Coffee Station.		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Carpet Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**		**Sidelight:**	
	Door Material:		**Glazing:**	
	Hardware:		**Notes:**	
	Frame:			
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	Natural daylight ~~preferred~~ for staff work area.
HVAC	**Heating:**	68-73oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(3) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	
	Fixture Type:	Direct-Indirect	**Notes:**	Multi-zone Control.
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:	~~**Prioritization - High:** Clerk of Courts' Safe. **Low:** OS1 at Judges, Magistrates, Court Admin, Calendar Management, Clerk of Courts, Court Reporter, Law Library, Bar Association.~~			
	~~**Lowest: Coffee station at** Calendar Management, Family Law and Dept of Social Services.~~			

Room Data Codes: **OS3**
Program Component: Open File Area, Storage / Supply Cabinet, Fireproof Storage

General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:			
		High- Judges: File: Lateral Cabinet, File: Open Shelving. Register of Wills: Fireproof File Storage.		
		Medium- at Sheriff: File: Vertical Cabinet, File: Lateral Cabinet, File: Open shelving. Magistrates: File: Lateral Cabinet, File: Open Shelving. Clerk of the Courts: Clerk Files: Lateral Cabinet, Clerk Files: Open Shelving, Land/ License Files Vertical Cabinet, Land/License File: Open Shelving. Register of Wills: File: Vertical Cabinet, File: Lateral Cabinet, File: Open Shelving.		
		Low- at Judges: File: Lateral Cabinet, File: Open Shelving. Court Administration: File: Vertical Cabinet, File: Lateral Cabinet, File: Open Shelving. Calendar Management: File: Open Shelving. Family Law: File: Lateral Cabinet, File: Open Shelving. Law Library: File: Vertical Cabinet, File: Lateral Cabinet. Jury Assembly: File: Vertical Cabinet, File: Lateral Cabinet, File: Open Shelving. State's Attorney: File: Vertical Cabinet, File: Lateral Cabinet. Public Defender: File: Lateral Cabinet. Department of Juvenile Services: File: Vertical Cabinet, File: Lateral Cabinet, File: Open Shelving. Department of Social Services: File: Lateral Cabinet.		
	Prioritization:	**Lowest-** at Department of Social Services: Supply Cabinet. Court Reporters: File: Vertical Cabinet, File: Lateral Cabinet, File: Open Shelving. Department of Social Services: Supply Cabinet		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Carpet Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**		**Sidelight:**	
	Door Material:		**Glazing:**	
	Hardware:		**Notes:**	
	Frame:			
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(6) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	
	Fixture Type:	Direct-Indirect	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:	(2) hour rate fireproof cabinet for OS3-Fireproof Storage.			
	~~**Prioritization - High:** storage for Judges, Sheriff. **Medium:** storage for Clerk of Courts and Register of Wills., **Lowest:** storage for Court Reporter.~~			

Room Data Codes:	**OT1**			
Program Component:	Marriage Ceremony Space			
General	**Min. Ceiling Height:**	12'-0"	**Notes:**	Accessible
	Acoustic:	High 50 STC		
	Prioritization:	**Medium-**		
Finishes	**Base:**	Wood	**Notes:**	
	Floor:	Carpet Tile		
	Wall:	Gypsum Board-paint, Wood		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	Double 36" Swing	**Sidelight:**	Yes
	Door Material:	Wood	**Glazing:**	Tempered
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**	Aluminum	**Glazing:**	
	Pass-Through:		**Notes:**	Natural daylight ~~preferred~~
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(4) Duplex, normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	
	Fixture Type:	Direct-Indirect	**Notes:**	Multi-Level Dimming.
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	Yes
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	Wall mounted monitor.
	Audio Visual:	Yes		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes: **OT2**
Program Component: Attorney Lounge

General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:	High 50 STC		
	Prioritization:	**Low**		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Carpet Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	Yes
	Door Material:	Wood	**Glazing:**	Tempered
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	Natural daylight ~~preferred~~.
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(4) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	120V dedicated equipment receptacle.
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Direct-Indirect	**Notes:**	Multi-zone Control.
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes: **OT3**
Program Component: Vending Area

General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:			
	Prioritization:	**Low**		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Resilient Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**		**Sidelight:**	
	Door Material:		**Glazing:**	
	Hardware:		**Notes:**	
	Frame:			
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(8) Dedicated Equip. Receptacle	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	
	Fixture Type:	Direct-Indirect	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes: **OT4**
Program Component: Wellness Room

General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:	Standard 45 STC		
		Medium- Jury Assembly: Wellness Room.		
	Prioritization:	**Low-** Building Support: Wellness Room.		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Resilient Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	No
	Door Material:	Wood	**Glazing:**	
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(4) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	40 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Direct-Indirect	**Notes:**	
Plumbing	**Fixture Material:**	Commercial	**Water Management:**	No
	Fixture Type:	Sink	**Notes:**	
	Accessible:	Yes		
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	Staff wellness room to have card access.
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes: **OT6**
Program Component: Security Station / Post

General	**Min. Ceiling Height:**	10'-0"	**Notes:**	
	Acoustic:			
	Prioritization:	**High**.		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Carpet Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**		**Sidelight:**	
	Door Material:		**Glazing:**	
	Hardware:		**Notes:**	
	Frame:			
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(2) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor/Switch
	Fixture Type:	Recessed	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**	Millwork	**Notes:**	
	Material:	Stone, Metal, Wood		
	Work Surface:	Plastic Laminate		
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	Yes
	Duress Alarm:	Yes	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes: OT7
Program Component: Media Room

General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:	Standard 45 STC		
	Prioritization:	**Medium.**		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Resilient Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	
	Door Material:	Wood	**Glazing:**	
	Hardware:	Commercial, locking	**Notes:**	
	Frame:	Hollow metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(4) Duplex - Normal Power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Direct-Indirect	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	One media room is for evidence viewing.
	Audio Visual:	Yes		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes: **SF1**
Program Component: Vehicular Sally Port, Gun Locker, Gun Station

General	**Min. Ceiling Height:**	Open to structure	**Notes:**	Accessible
	Acoustic:			
	Prioritization:	High.		
Finishes	**Base:**	Concrete Masonry Unit Painted	**Notes:**	
	Floor:	Sealed Concrete		
	Wall:	Concrete Masonry Unit painted		
	Ceiling:	Exposed to structure-painted		
Doors	**Door Type:**	Bi-Fold security gate at vehicular sally port	**Sidelight:**	No
	Door Material:	Detention	**Glazing:**	
	Hardware:	Detention Hardware	**Notes:**	
	Frame:	Detention Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	Yes
	Cooling:		**Notes:**	Provide exhaust
	Schedule:	24/7		
Fire Protection	**System Type:**	Dry Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	Duplex-Normal power	**Emergency Power:**	Yes
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Control Panel
	Fixture Type:	Suspended	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	No
	Fixture Type:	Floor Drain	**Notes:**	See eye wash station.
	Accessible:	Yes		
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	Yes
	Card Access:	No	**Intercom:**	Yes
	Duress Alarm:		**Notes:**	Detention Control required.
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:	Gun Locker Cabinet (20 guns).			

Room Data Codes: **SF2**
Program Component: Security Office / Command Room

General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:	Standard 45 STC		
	Prioritization:	**High.**		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Resistant Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Gypsum Board-paint, Acoustic Panel with hold down clip		
Doors	**Door Type:**	36" Swing	**Sidelight:**	No
	Door Material:	Wood	**Glazing:**	
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	One way glass
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	Yes
	Cooling:	72-76oF	**Notes:**	
	Schedule:	24/7		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	Duplex-Normal power	**Emergency Power:**	Yes
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Control Panel
	Fixture Type:	Recessed, Direct-Indirect	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	Yes	**Notes:**	Wi-Fi required.
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	Yes
	Card Access:	Yes	**Intercom:**	Yes
	Duress Alarm:	Yes	**Notes:**	Detention Control required.
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:	Gun Locker Cabinet (20 guns).			

Room Data Codes:	**SF3**			
Program Component:	Animal Holding			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	
	Acoustic:	Very high - 55 STC		
	Prioritization:	**High.**		
Finishes	**Base:**	Concrete Masonry Unit painted	**Notes:**	
	Floor:	Sealed Concrete		
	Wall:	Concrete Masonry Unit painted		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	Yes
	Door Material:	Wood	**Glazing:**	Tempered
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	Yes
	Cooling:	72-76oF	**Notes:**	Provide exhaust; High temperature alarm required for holding in K-9 office.
	Schedule:			
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(4) Duplex- Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**		**Emergency Light:**	As required by code
	Level (FC):		**Lighting Control:**	Control Panel
	Fixture Type:	Recessed, Direct-Indirect	**Notes:**	
Plumbing	**Fixture Material:**	Commercial	**Water Management:**	
	Fixture Type:	Stainless Steel Sink, stainless steel bathing tub.	**Notes:**	Floor Drain
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**	Upper and lower cabinet	**Notes:**	
	Material:	Plastic Laminate		
	Work Surface:	Stainless Steel		
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	Yes
	Card Access:	Yes	**Intercom:**	Yes
	Duress Alarm:	No	**Notes:**	Detention Control required.
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail. Spaces for (2) canines.			
Equipment:				
Other Notes:				

Room Data Codes: **SF4**
Program Component: Control Room

General	**Min. Ceiling Height:**	10'-0"	**Notes:**	
	Acoustic:	Standard 45 STC		
	Prioritization:	**High**		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Resilient Tile		
	Wall:	Concrete Masonry Unit painted		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	
	Door Material:	Detention Hollow Metal	**Glazing:**	Security
	Hardware:	Detention Hardware	**Notes:**	Commercial hardware with card access and hollow metal frames / wood door at court services' Control Room.
	Frame:	Detention Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	Yes
	Cooling:	72-76oF	**Notes:**	
	Schedule:	24/7		
Fire Protection	**System Type:**	Dry Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(8) Duplex-Emergency power	**Emergency Power:**	Yes
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Control Panel
	Fixture Type:	Recessed, Direct-Indirect	**Notes:**	Multi-zone Control
Plumbing	**Fixture Material:**		**Water Management:**	No
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	Yes
	Card Access:	No	**Intercom:**	Yes
	Duress Alarm:	Yes	**Notes:**	Detention Control required, card access at court services' Control Room.
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes:	**SF5**			
Program Component:	Prisoner Processing Counter (open counter)			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:			
	Prioritization:	**Highest**		
Finishes	**Base:**	Concrete Masonry Unit painted	**Notes:**	
	Floor:	Sealed Concrete		
	Wall:	Concrete Masonry Unit painted		
	Ceiling:	Security Plank Ceiling		
Doors	**Door Type:**	Swing gate at counter	**Sidelight:**	
	Door Material:		**Glazing:**	
	Hardware:		**Notes:**	
	Frame:			
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	Yes
	Cooling:	72-76oF	**Notes:**	
	Schedule:	24/7		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads, anti-ligature institutional style heads.		
Electrical - Power	**Outlets:**	(4) Duplex	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Security Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Control Panel and Central Control
	Fixture Type:	Detention Recessed	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**	Millwork	**Notes:**	
	Material:	Stainless Steel, Plastic Laminate work surface.		
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	Yes
	Card Access:	No	**Intercom:**	Yes
	Duress Alarm:	Yes	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes:	**SF6**			
Program Component:	Property Storage			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:			
	Prioritization:	**Highest**		
Finishes	**Base:**	Concrete Masonry Unit painted	**Notes:**	
	Floor:	Sealed Concrete		
	Wall:	Concrete Masonry Unit painted		
	Ceiling:	Security Plank Ceiling		
Doors	**Door Type:**	36" Swing	**Sidelight:**	Yes
	Door Material:	Detention Hollow Metal	**Glazing:**	Security
	Hardware:	Detention Hardware / Cabinet Lock	**Notes:**	
	Frame:	Detention Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	Yes
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Recessed		
Electrical - Power	**Outlets:**		**Emergency Power:**	
	Voltage:		**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Security Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Control Panel and Central Control
	Fixture Type:	Detention Recessed	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**	Concrete Millwork	**Notes:**	
	Material:	Stainless Steel		
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	Yes
	Card Access:	Yes	**Intercom:**	Yes
	Duress Alarm:	No	**Notes:**	Detention Control required.
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail; Cabinet.			
Equipment:				
Other Notes:				

Room Data Codes:	**SF7**			
Program Component:	Search Alcove			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:			
	Prioritization:	**Highest**		
Finishes	**Base:**	Concrete Masonry Unit painted	**Notes:**	
	Floor:	Sealed Concrete		
	Wall:	Concrete Masonry Unit painted		
	Ceiling:	Security Plank Ceiling		
Doors	**Door Type:**		**Sidelight:**	
	Door Material:		**Glazing:**	
	Hardware:		**Notes:**	
	Frame:			
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	Yes
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads, anti-ligature institutional style heads.		
Electrical - Power	**Outlets:**		**Emergency Power:**	
	Voltage:		**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Security Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Control Panel and Central Control
	Fixture Type:	Detention Recessed	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	Floor Drain
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	Yes
	Duress Alarm:	No	**Notes:**	Detention Control required.
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail; stainless steel counter with handcuff.			
Equipment:				
Other Notes:				

Room Data Codes: **SF8**
Program Component: Prisoner Lunch Storage

General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:			
	Prioritization:	**Medium.**		
Finishes	**Base:**	Concrete Masonry Unit painted	**Notes:**	
	Floor:	Sealed Concrete		
	Wall:	Concrete Masonry Unit painted		
	Ceiling:	Acoustic Panel with hold down clip		
Doors	**Door Type:**	36" Swing	**Sidelight:**	
	Door Material:	Detention Hollow Metal	**Glazing:**	
	Hardware:	Detention Hardware	**Notes:**	
	Frame:	Detention Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	Yes
	Cooling:	72-76oF	**Notes:**	
	Schedule:			
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(1) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	Power for refrigerator.
Electrical - Lighting	**Lighting Type:**	LED Security Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Control Panel and Central Control
	Fixture Type:	Detention Recessed	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:	Sink	**Notes:**	Floor Drain
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**	Counter	**Notes:**	
	Material:	Stainless Steel		
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	Yes
	Card Access:	No	**Intercom:**	Yes
	Duress Alarm:	No	**Notes:**	Detention Control required.
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail; refrigerator, counter, sinks.			
Equipment:				
Other Notes:				

Room Data Codes:	**SF9**			
Program Component:	Visitation Booth			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:	High 50 STC		
	Prioritization:	**High**.		
Finishes	**Base:**	Concrete Masonry Unit painted	**Notes:**	
	Floor:	Sealed Concrete		
	Wall:	Concrete Masonry Unit painted		
	Ceiling:	Security Plan Ceiling		
Doors	**Door Type:**	36" Swing	**Sidelight:**	Yes
	Door Material:	Hollow Metal	**Glazing:**	Security
	Hardware:	Detention Hardware	**Notes:**	
	Frame:	Security Hollow Metal		
Windows	**Frame:**	Talk-around frame	**Glazing:**	Security
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	Yes
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Recessed, anti-ligature institutional style heads.		
Electrical - Power	**Outlets:**	(1) Duplex Receptacle (only at attorney side)	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Security Grade	**Emergency Light:**	As required by code
	Level (FC):	40 fc	**Lighting Control:**	Control Panel and Central Control
	Fixture Type:	Detention	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**	Counter	**Notes:**	
	Material:	Stainless Steel		
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	Yes
	Card Access:	No	**Intercom:**	Yes
	Duress Alarm:	No	**Notes:**	Detention Control required.
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail; at detainee side, stainless steel fixed stool			
Equipment:				
Other Notes:	Door at attorney side is 36" swing, wood, hardware commercial, frame hollow metal. Lighting at attorney side is commercial grade recessed, direct / indirect.			

Room Data Codes:	**SS1**			
Program Component:	Break Room			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:	Low 35 STC		
		Low- Sheriff: Break Room. State's Attorney- Break Room.		
	Prioritization:	Lowest- Clerk of the Courts: Break Room. Bar Association: Attorney Lounge.		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	SS1 in Bar Association to have Carpet Tile.
	Floor:	Resilient Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	Yes
	Door Material:	Wood	**Glazing:**	Tempered
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**	Hollow Metal	**Glazing:**	
	Pass-Through:		**Notes:**	Natural daylight preferred.
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	Provide exhaust
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(8) Duplex	**Emergency Power:**	
	Voltage:	120V	**Notes:**	120V Dedicated Equip. Receptacles.
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	30 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Recessed, Direct-Indirect	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	No
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	Yes	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	No
	Card Access:	Yes	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes:	**SS2**			
Program Component:	Kitchenette, Alcove / Open			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:			
		Medium- Jury Assembly: Kitchenette.		
		Low- Judges: Kitchenette. Magistrates: Kitchenette. Jury Assembly: Bailiff Lockers. Sheriff: Kitchenette. State's Attorney: Kitchenette.		
	Prioritization:	**Lowest-** Judges: Shared Kitchenette. Department of Juvenile Services: Kitchenette. Court Administration: Kitchenette. Clerk of the Courts: Kitchenette. Register of Wills: Kitchenette. Orphan's Court: Kitchenette. State's Attorney: Kitchenette.		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Resilient Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**		**Sidelight:**	
	Door Material:		**Glazing:**	
	Hardware:		**Notes:**	
	Frame:			
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	Provide exhaust
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(2) GCFI Alcove center-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	120V Dedicated Equip. Receptacles.
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	30 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Recessed	**Notes:**	
Plumbing	**Fixture Material:**	Commercial	**Water Management:**	No
	Fixture Type:	Sink	**Notes:**	Garbage Disposal; Insta-hot.
	Accessible:	Yes		
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	Yes	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**	Upper and Lower Cabinets	**Notes:**	
	Material:	Solid surface countertop, plastic laminate / wood cabinets.		
	Work Surface:			
Electronic Security	**CTV Camera:**		**Door Position Switch:**	
	Card Access:		**Intercom:**	
	Duress Alarm:		**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes:	**SS3**			
Program Component:	Staff Lockers, Room			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:	Standard 45 STC		
	Prioritization:	**Medium-** Sheriff: Lockers- Male, Lockers- Female. **Low-** Sheriff: Staff Lockers.		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Resilient Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	
	Door Material:	Wood	**Glazing:**	
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	Provide exhaust
	Schedule:			
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(4) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**		**Emergency Light:**	As required by code
	Level (FC):		**Lighting Control:**	Control Panel
	Fixture Type:	Recessed, Direct-Indirect	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	Yes
	Card Access:	Yes	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail; Full size lockers, Bench.			
Equipment:				
Other Notes:				

Room Data Codes:	**SS4**			
Program Component:	Fitness Room			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:	High 55 STC		
	Prioritization:	Medium		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Vinyl Rubber Base		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	
	Door Material:	Wood	**Glazing:**	
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:			
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(4) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED	**Emergency Light:**	As required by code
	Level (FC):		**Lighting Control:**	Control Panel
	Fixture Type:	Recessed, Direct-Indirect	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:	Stainless Steel Water Fountain	**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	No
	Card Access:	Yes	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes:	**ST1, ST2**			
Program Component:	Storage Room			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:			
		Highest- ST2 Clerk of Court's Exhibit Storage.		
		High: ST2 at Clerk of the Courts: Exhibit Room.		
		Low- ST1 at Court Administration: Interpreter Equipment Storage. ST1 at Court Sets: Courtroom Storage. ST1 at Register of Wills: Supply Storage. ST1 at Sheriff: Supply Storage. ST1 at State's Attorney: Storage. ST2 at Calendar Management: IT Storage. ST2 at Family Law: Supply Storage. ST2 at Clerk of the Courts: Land Use Book Storage, Supply Storage. ST2 at Law Library: Attorney Lounge. ST2 at Jury Assembly: Storage. ST2 at Sheriff: Quartermaster Storage. ST2 at Department of Juvenile Services: Supply Storage.		
	Prioritization:	**Lowest- ST1 at Magistrates: Supply Storage. ST1 at Department of Juvenile Services: Supply Storage.** ST2 at Court Admin, Calendar Management, ST2 at **Law Library: Supply Storage. ST2 at Orphan's Court: Supply Storage. ST2 at Court Reporters: Supply Storage. ST1 at Department of Juvenile Services: Supply Storage. ST2 at Court Administration: Supply Storage. ST2 at State's Attorney: Supply Storage. ST2 at Calendar Management: Supply Storage. ST2 at Bar Association: Supply Storage.**		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Resilient Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	
	Door Material:	Wood	**Glazing:**	
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(2) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Recessed, Direct-Indirect	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	If the courtroom storage is outside of the courtroom, card access is needed.
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes:	**ST3**			
Program Component:	Coat Closet, Quartermaster Storage			
General	**Min. Ceiling Height:**	9'-0"	**Notes:**	Accessible
	Acoustic:			
	Prioritization:	**Low-** Jury Assembly: Coat Room. **Lowest-** Judges: Coat Closet. Court Administration: Coat Closet. Magistrates: Coat Closet. Sheriff: Coat Closet. Calendar Management: Coat Closet. Family Law: Coat Closet. Clerk of the Courts: Coat Closet. Register of Wills: Coat Closet. Orphan's Court: Coat Closet. Court Reporters: Coat Closet. Jury Assembly: Coat Closet. State's Attorney: Coat Closet. Department of Juvenile Services: Coat Closet. Department of Social Services: Coat Closet. Bar Association: Coat Closet.		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Carpet Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	No
	Door Material:	Wood	**Glazing:**	
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(1) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	30 fc	**Lighting Control:**	Occupancy Sensor/Switch
	Fixture Type:	Recessed	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:	Provide metal coat rod and wood shelf.			

Room Data Codes:	**ST4**			
Program Component:	Secure Storage (Armory, Secure Equip.)			
General	**Min. Ceiling Height:**	9'-0"	**Notes:**	
	Acoustic:			
	Prioritization:	**High**		
Finishes	**Base:**	Concrete Masonry Unit painted	**Notes:**	
	Floor:	Sealed Concrete		
	Wall:	Concrete Masonry Unit painted		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	
	Door Material:	Hollow Metal	**Glazing:**	
	Hardware:	Card Reader, security code	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	24/7		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(2) Duplex-Normal power	**Emergency Power:**	Yes, selected receptacle
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Direct-Indirect	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	Yes
	Card Access:	Yes	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	Detention Control required.
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes:	**ST5**			
Program Component:	Security Office Storage Room, Building Support			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:			
		Highest- State's Attorney: Evidence Storage. **High-** Sheriff: Property Tax, Evidence Room.		
	Prioritization:	**Medium-** Sheriff: Transport Equipment Storage, Security Equipment Room. Building Support: Security Office Storage.		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Resilient Tile		
	Wall:	Gypsum Board - paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	No
	Door Material:	Wood	**Glazing:**	
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(2) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	30 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Direct-Indirect	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	Yes
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	Card reader at security office storage.
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes:	**ST6**			
Program Component:	Bulk, Housekeeping Storage			
General	**Min. Ceiling Height:**		**Notes:**	Accessible
	Acoustic:			
	Prioritization:	**Lowest.**		
Finishes	**Base:**	Concrete Masonry Unit painted, Vinyl Rubber Base	**Notes:**	
	Floor:	Sealed Concrete		
	Wall:	Concrete Masonry Unit, Chain-link, Gypsum Board-paint		
	Ceiling:	Exposed to Structure		
Doors	**Door Type:**	Swing	**Sidelight:**	No
	Door Material:	Chain-link, Hollow Metal	**Glazing:**	
	Hardware:	Commercial	**Notes:**	Chain link separation.
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(2) Duplex-Normal power	**Emergency Power:**	No
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Suspended	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	No
	Card Access:	Yes	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes:	**TC1, TC2, TC3**			
Program Component:	AV Closet, Server Room / Closet, Server Rack (all enclosed)			
General	**Min. Ceiling Height:**	9'-0"	**Notes:**	Server Rack ceiling height is 10'-0".
	Acoustic:			
	Prioritization:	**Highest-** TC1 at Court Sets: AV Closet. TC2 at Calendar Management: Server Room. **High-** TC1 at Hearing Rooms: AV Closet. TC1 at Orphan's Court: AV Closet. TC2 at Clerk of the Courts: Tech. Closet. TC2 at Sheriff: Server Rack. TC2 at State's Attorney: Server Closet. TC2 at Department of Juvenile Services: Server Closet. TC2 at Department of Social Services: Server Closet. TC3 at Court Administration: Server Rack.		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Resilient Tile		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel / Gypsum Board-paint		
Doors	**Door Type:**	36" Swing	**Sidelight:**	No
	Door Material:	Wood	**Glazing:**	
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	Yes
	Cooling:	72-76oF	**Notes:**	
	Schedule:	24/7		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(6) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Recessed	**Notes:**	Server Rack has Suspended Fixture Types; AV closet has Direct-Indirect Fixtures types.
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	
	Audio Visual:	Yes		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	Yes
	Card Access:	Yes	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	AV closet requires card access and door switch position.
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes:	**TC4**			
Program Component:	Work Area			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:			
	Prioritization:	Low		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Resilient Tile		
	Wall:	Gypsum Board - paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	Yes
	Door Material:	Wood	**Glazing:**	Tempered
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	Yes
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(4) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Direct-Indirect	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes:	**TO1**			
Program Component:	Public Toilet Room, Jury Toilet Room			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:	High 50 STC		
	Prioritization:	**Highest-** Court Sets: Jury Toilet. Jury Assembly: Public Toilet. **High-** Judges: Public Toilet. State's Attorney: Public Toilet.		
Finishes	**Base:**	Terrazzo	**Notes:**	Jury Toilet Room has porcelain tile base and floor and ceramic tile wall.
	Floor:	Terrazzo		
	Wall:	Porcelain Tile		
	Ceiling:	Gypsum Board - paint		
Doors	**Door Type:**	36" Swing	**Sidelight:**	No
	Door Material:	Wood	**Glazing:**	
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	Provide exhaust
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(2) GCFI-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	30 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Recessed, wall mounted	**Notes:**	
Plumbing	**Fixture Material:**	Commercial	**Water Management:**	No
	Fixture Type:	Porcelain, wall mounted toilet fixtures porcelain lavatory	**Notes:**	Floor Drain
	Accessible:	Yes		
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**	Counter	**Notes:**	
	Material:	Solid Surface		
	Work Surface:			
Electronic Security	**CTV Camera:**		**Door Position Switch:**	
	Card Access:		**Intercom:**	
	Duress Alarm:		**Notes:**	
Furnishing / Fixtures:				
Equipment:	Refer to Sections 4.10, for further detail.			
Other Notes:	Include Toilet paper holders, soap dispensers, mirrors, hand drying, paper towel dispensers, sanitary napkin disposals, baby changing stations, toilet seat covers.			

Room Data Codes: **TO2**

Program Component: Judge's Toilet, Staff Toilet Room, Building Support Toilet Room

General	**Min. Ceiling Height:**	9'-0"	**Notes:**	Accessible
	Acoustic:	High 50 STC		
		High- Court Sets: Robing Room Toilet. Judges: Judge's Toilet, Secretary/Reception. Magistrates: Magistrates Toilet. Clerk of Courts: Clerk of the Circuit Court's Toilet. Register of Wills: Register of Wills Toilet. Orphan's Court: Judge's Toilet. Sheriff: Sheriff's Toilet, Staff Toilet, Control Room Toilet. Building Support: Public Toilet.		
		Medium- Judges: Staff Toilet. Building Support: Staff Toilet.		
		Low- Sheriff: Sheriff's Deputy Toilet.		
	Prioritization:	Lowest- Building Support: Maintenance Toilet.		
Finishes	**Base:**	Porcelain Tile	**Notes:**	
	Floor:	Porcelain Tile		
	Wall:	Ceramic Tile		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	No
	Door Material:	Wood	**Glazing:**	
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	Provide exhaust
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(2) GCFI-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	30 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Recessed	**Notes:**	
Plumbing	**Fixture Material:**	Commercial	**Water Management:**	No
	Fixture Type:	Lavatories, porcelain toilet fixtures	**Notes:**	Floor Drain
	Accessible:	Yes		
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**	Counter	**Notes:**	Judge's toilet to have vanity.
	Material:	Solid Surface		
	Work Surface:			
Electronic Security	**CTV Camera:**		**Door Position Switch:**	
	Card Access:		**Intercom:**	
	Duress Alarm:		**Notes:**	
Furnishing / Fixtures:				
Equipment:	Refer to Section 4.10, for further detail.			
Other Notes:	Include Toilet has vanity at sink; coat hook; Toilet paper holders, soap dispensers, mirrors, hand drying, paper towel dispensers, sanitary napkin disposals, baby changing stations, toilet seat covers.			

Room Data Codes:	**TO3**			
Program Component:	Toilet / Shower Room			
General	**Min. Ceiling Height:**	9'-0"	**Notes:**	Accessible
	Acoustic:	High 50 STC		
	Prioritization:	**Low-**		
Finishes	**Base:**	Porcelain Tile	**Notes:**	
	Floor:	Porcelain Tile		
	Wall:	Porcelain Tile, Ceramic Tile		
	Ceiling:	Gypsum Board-paint		
Doors	**Door Type:**	36" Swing	**Sidelight:**	No
	Door Material:	Wood	**Glazing:**	
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	Provide exhaust
	Schedule:			
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(2) GCFI-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	30 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Recessed	**Notes:**	
Plumbing	**Fixture Material:**	Commercial	**Water Management:**	
	Fixture Type:	Shower, Porcelain Toilet, Porcelain Lavatory	**Notes:**	Floor Drain
	Accessible:	Yes		
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**	Vanity	**Notes:**	
	Material:	Wood, Plastic Laminate		
	Work Surface:			
Electronic Security	**CTV Camera:**		**Door Position Switch:**	
	Card Access:		**Intercom:**	
	Duress Alarm:		**Notes:**	
Furnishing / Fixtures:				
Equipment:	Refer to Sections 4.10, for further detail.			
Other Notes:	Include Toilet paper holders, soap dispensers, mirrors, hand drying, paper towel dispensers, sanitary napkin disposals, toilet seat covers; curtain rod, hooks, soap dish, grab bars, folding seat.			

Room Data Codes:	**TO4**			
Program Component:	Drug Testing Toilet Room			
General	**Min. Ceiling Height:**	9'-0"	**Notes:**	Accessible
	Acoustic:	Standard 45 STC		
	Prioritization:	**High.**		
Finishes	**Base:**	Porcelain Tile	**Notes:**	
	Floor:	Porcelain Tile		
	Wall:	Porcelain Tile, Gypsum Board-paint		
	Ceiling:	Gypsum Board-paint		
Doors	**Door Type:**	36" Swing	**Sidelight:**	No
	Door Material:	Wood	**Glazing:**	
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	Provide exhaust
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(2) GCFI-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	30 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Recessed	**Notes:**	
Plumbing	**Fixture Material:**	Commercial	**Water Management:**	No
	Fixture Type:	Porcelain toilet and lavatories	**Notes:**	Floor Drain
	Accessible:	Yes		
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**	Counter	**Notes:**	
	Material:	Stainless Steel Counter		
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	No
	Card Access:	Yes	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:				
Equipment:	Refer to Sections 4.10, for further detail.			
Other Notes:	Include Toilet paper holders, soap dispensers, mirrors, hand drying, paper towel dispensers.			

Room Data Codes:	**TO5**			
Program Component:	Eye Wash Station, Emergency Shower			
General	**Min. Ceiling Height:**	9'-0"	**Notes:**	Accessible
	Acoustic:	Standard 45 STC		
	Prioritization:	**Medium**		
Finishes	**Base:**	Concrete Masonry Unit- painted	**Notes:**	Stainless steel security cabinet shower at emergency shower. Eye wash Station in Central Mail room should match finishes with adjacent space.
	Floor:	Sealed Concrete		
	Wall:	Concrete Masonry Unit- painted		
	Ceiling:	Security Plank		
Doors	**Door Type:**		**Sidelight:**	
	Door Material:		**Glazing:**	
	Hardware:		**Notes:**	
	Frame:			
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	Yes
	Cooling:	72-76oF	**Notes:**	Provide exhaust
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Recessed, anti-ligature institutional style heads.		
Electrical - Power	**Outlets:**		**Emergency Power:**	
	Voltage:		**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Security Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Control Panel and Central Control
	Fixture Type:	Detention Recessed	**Notes:**	
Plumbing	**Fixture Material:**	Stainless Steel	**Water Management:**	No
	Fixture Type:	Detention Grade	**Notes:**	Floor Drain
	Accessible:	Yes		
AV / Telecom	**Telephone:**		**Devices:**	
	Data:		**Assistive Listening:**	
	Wi-Fi:			
	MATV:		**Notes:**	
	Audio Visual:			
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:				
Equipment:	Refer to Sections 4.10, for further detail.			
Other Notes:				

Room Data Codes:	**VS1**			
Program Component:	Courtroom and Hearing Room Vestibule			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:			
	Prioritization:	**Highest-** Court Sets: Courtroom Vestibule. **High-** Hearing Room: Hearing Room Waiting. Orphan's Court: Courtroom Vestibule.		
Finishes	**Base:**	Wood	**Notes:**	
	Floor:	Carpet		
	Wall:	Gypsum Board-paint, Wood		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	Yes
	Door Material:	Wood	**Glazing:**	Tempered
	Hardware:	Commercial	**Notes:**	Transom over doors is preferred.
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(1) Duplex	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Recessed	**Notes:**	Multi-Level Dimming.
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes:	**VS2**			
Program Component:	Jury Deliberation Vestibule			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible; potential for white noise.
	Acoustic:			
	Prioritization:	**Highest-** Court Sets: Jury Deliberation Vestibule. **High-** State's Attorney: Vestibule.		
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Carpet		
	Wall:	Gypsum Board-paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	No
	Door Material:	Wood	**Glazing:**	
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(1) Duplex	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Recessed	**Notes:**	Multi-Level Dimming
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes:	**VS3**			
Program Component:	Secure Vestibule / Soundlock, Secure			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:			
	Prioritization:	**Highest-** Court Sets: Holding Sound Lock, Holding Vestibule. **High-** Hearing Rooms: Holding Sound Lock.		
Finishes	**Base:**	Concrete Masonry Unit painted	**Notes:**	
	Floor:	Sealed Concrete		
	Wall:	Concrete Masonry Unit painted		
	Ceiling:	Security Plank Ceiling		
Doors	**Door Type:**	36" Swing	**Sidelight:**	Only at door between Holding Area and Vestibule.
	Door Material:	Detention Hollow Metal	**Glazing:**	Security
	Hardware:	Detention	**Notes:**	Sally port
	Frame:	Detention Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**		**Emergency Power:**	
	Voltage:		**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Security Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Control Panel and Central Control
	Fixture Type:	Recessed	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	Yes
	Card Access:	Yes	**Intercom:**	Yes
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes:	**VS4**			
Program Component:	Secure Vestibule, Pedestrian Sally Port			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:			
	Prioritization:	Highest		
Finishes	**Base:**	N/A	**Notes:**	
	Floor:	Sealed Concrete		
	Wall:	Concrete Masonry Unit painted		
	Ceiling:	Security Plank Ceiling		
Doors	**Door Type:**	Slider	**Sidelight:**	Yes
	Door Material:	Detention Hollow Metal	**Glazing:**	Security
	Hardware:	Detention	**Notes:**	Sally port
	Frame:	Detention Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Dry Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**		**Emergency Power:**	
	Voltage:		**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Security Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Control Panel and Central Control
	Fixture Type:	Recessed	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	Yes
	Card Access:	Yes	**Intercom:**	Yes
	Duress Alarm:	No	**Notes:**	Detention Control required.
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes: VS5
Program Component: Weather Vestibule

General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:			
	Prioritization:	**High**		
Finishes	**Base:**		**Notes:**	
	Floor:	Recessed Metal Grating		
	Wall:	Glass / Aluminum		
	Ceiling:			
Doors	**Door Type:**	Storefront	**Sidelight:**	
	Door Material:	Aluminum	**Glazing:**	Insulated
	Hardware:	Commercial	**Notes:**	Two sets of double doors; glazed wall system.
	Frame:	Aluminum		Push plate for ADA access.
Windows	**Frame:**		**Glazing:**	Insulated, Ballistic glazing min. 8'-0" high.
	Pass-Through:		**Notes:**	Natural daylight preferred.
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Dry Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**		**Emergency Power:**	
	Voltage:		**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	40 fc	**Lighting Control:**	Control Panel and Central Control
	Fixture Type:	Recessed	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	No
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	No
	Card Access:	Yes	**Intercom:**	Yes
	Duress Alarm:	No	**Notes:**	

Furnishing / Fixtures: Refer to Sections 4.10, for further detail.
Equipment:
Other Notes: ADA access push plate at door.

Room Data Codes:	**WA1**			
Program Component:	Courtroom Waiting Area, Open			
General	**Min. Ceiling Height:**	12'-0"	**Notes:**	Accessible
	Acoustic:			
	Prioritization:	**Highest-** Court Sets: Courtroom Waiting. **High-** Orphan's Court: Courtroom Waiting. Hearing room. **Low-** Department of Social Services: Courtroom Waiting.		
Finishes	**Base:**	Terrazzo	**Notes:**	
	Floor:	Terrazzo		
	Wall:	Wood, Stone, Porcelain Tile		
	Ceiling:	Acoustical Panel; Gypsum Board - paint		
Doors	**Door Type:**		**Sidelight:**	
	Door Material:		**Glazing:**	
	Hardware:		**Notes:**	
	Frame:			
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	Natural daylight ~~preferred~~.
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(2) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Control Panel
	Fixture Type:	Direct-Indirect	**Notes:**	Multi-zone Control
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	Yes - for docket	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	Yes	**Notes:**	Digital Docket at each waiting area of courtroom.
	Audio Visual:	Yes		
Casework	**Type:**	Fixed Seating	**Notes:**	
	Material:	Wood, Stone		
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes: **WA2**
Program Component: Judicial Reception

General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:	Low 35 STC		
	Prioritization:	**High**		
Finishes	**Base:**	Wood	**Notes:**	
	Floor:	Carpet Tile		
	Wall:	Gypsum Board-paint, Wood		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	Yes
	Door Material:	Wood	**Glazing:**	Tempered
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	~~Natural daylight preferred.~~ Borrowed or Direct daylight
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(3) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Control Panel
	Fixture Type:	Direct - Indirect	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	Yes	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**	Reception Counter	**Notes:**	
	Material:	Wood, Stone, solid surfacing		
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	Yes
	Card Access:	Yes	**Intercom:**	Yes
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes:	**WA3, WA4**			
Program Component:	Waiting Area, Open Play Area			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:	Low 35 STC		
		High- WA3 at Calendar Management: Waiting. WA3 at Orphan's Court: Waiting Area. WA3 at State's Attorney: Victim/ Witness waiting.		
		Medium- WA3 at Family Law: Waiting. WA3 at Clerk of the Courts: Waiting, Public Form Counter, Title Search Bins, Marriage Waiting. WA3 at Register of Wills: Waiting. WA3 at Sheriff: Waiting, Officer Waiting Area. State's Attorney: Public Waiting. WA3 at Department of Juvenile Services: Waiting. WA4 at Department of Social Services: Children's Play Area.		
	Prioritization:	**Low-** WA3 at Family Law: Form Review Table. WA3 Department of Social Services: Waiting. WA4 at Clerk of the Courts: Children's Play Area. WA4 at Department of Juvenile Services: Children's Play Area.		
Finishes	**Base:**	Terrazzo	**Notes:**	Children's Play area to have carpet / rug / soft material.
	Floor:	Terrazzo		
	Wall:	Gypsum Board - paint, Wood, Porcelain Tile		
	Ceiling:	Gypsum Board - paint		
Doors	**Door Type:**	Double 36" Swing	**Sidelight:**	Yes
	Door Material:	Glass	**Glazing:**	Tempered
	Hardware:	Commercial	**Notes:**	Storefront
	Frame:	Aluminum, Wood		
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	Natural daylight ~~preferred~~
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(4) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	30 fc	**Lighting Control:**	Control Panel
	Fixture Type:	Direct - Indirect	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	No	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	Yes	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**	Public Counter	**Notes:**	Counter for filling forms - standing height.
	Material:	Plastic Laminate		
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	
	Card Access:	No	**Intercom:**	
	Duress Alarm:	Yes (WA3)	**Notes:**	Duress alarm at staff side of the public counter.
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:	~~**Prioritization - High:** WA3- Calendar Management, Clerk of Courts' Form Counter, Orphan's Court, State's Attorney Victim Waiting, Sheriff. **Low:** Family Law's From review, Clerk of Courts 's WA4, Dept of Juvenile Service's WA4.~~			

Room Data Codes:	**WA5**			
Program Component:	Sheriff Computers / Public Kiosks			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:			
	Prioritization:	**High-** Clerk of the Courts: Public Computer Kiosks. **Medium-** Register of Wills: Public Kiosks.		
Finishes	**Base:**	Terrazzo	**Notes:**	
	Floor:	Terrazzo		
	Wall:	Gypsum Board - paint, Wood, Porcelain Tile		
	Ceiling:	Gypsum Board - paint		
Doors	**Door Type:**		**Sidelight:**	
	Door Material:		**Glazing:**	
	Hardware:		**Notes:**	
	Frame:			
Windows	**Frame:**		**Glazing:**	Yes
	Pass-Through		**Notes:**	Natural daylight ~~preferred~~
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(4) Duplex-Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	30 fc	**Lighting Control:**	Control Panel
	Fixture Type:	Direct - Indirect	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	Yes	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**	Counter	**Notes:**	
	Material:	Plastic Laminate		
	Work Surface:	Plastic Laminate		
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	Yes
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes:	**WA6**			
Program Component:	Sheriff Visitor Waiting Area			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:			
	Prioritization:	**High.**		
Finishes	**Base:**	Vinyl Rubber	**Notes:**	
	Floor:	Vinyl Tile		
	Wall:	Gypsum Board - paint		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**		**Sidelight:**	
	Door Material:		**Glazing:**	
	Hardware:		**Notes:**	
	Frame:			
Windows	**Frame:**		**Glazing:**	Yes
	Pass-Through:		**Notes:**	Natural daylight preferred. Borrowed or Direct daylight
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(4) Duplex - Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	30 fc	**Lighting Control:**	Control Panel
	Fixture Type:	Direct - Indirect	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	No	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	No		
	MATV:	Yes	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes: **WA7**
Program Component: Victim Witness Waiting

General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:	High 50 STC		
	Prioritization:	**High**		
Finishes	**Base:**	Vinyl Rubber Base / Wood	**Notes:**	
	Floor:	Carpet Tile		
	Wall:	Gypsum Board - paint, Chair Rail		
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**	36" Swing	**Sidelight:**	Yes
	Door Material:	Wood	**Glazing:**	Tempered
	Hardware:	Commercial	**Notes:**	
	Frame:	Hollow Metal		
Windows	**Frame:**		**Glazing:**	Clear / Translucent
	Pass-Through:		**Notes:**	Natural daylight ~~preferred~~
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(4) Duplex - Normal power, Min 1 floor box	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor / Switch
	Fixture Type:	Direct - Indirect	**Notes:**	Multi-Level Dimming.
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	Yes
	Wi-Fi:	No		
	MATV:	No	**Notes:**	
	Audio Visual:	Yes		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	Yes
	Card Access:	Yes	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:				

Room Data Codes:	**WS1, WS2, WS3**			
Program Component:	Open Workstation			
General	**Min. Ceiling Height:**	10'-0"	**Notes:**	Accessible
	Acoustic:			
		High- WS1 at Calendar Management: Criminal Case Manager, Family Technician, Technical Specialist, IT, Civil Case Manager. WS1 at Sheriff: Domestic Violence. WS3 at Magistrates: Administrative Assistant/Reception.		
		Medium- WS1 at Court Administration: Administrative Assistant. WS1 at Calendar Management: File Manager. WS1 at Family Law: Family Coordinator, Family Technician, Juvenile Court Reporter. WS1 at Clerk of the Courts:: Civil Supervisor, Criminal/Juvenile Manager Supervisor, Civil Clerk, Criminal/Juvenile Clerk, Land Records/License Supervisor, Land Records/ License Clerk. WS1 at Register of Wills: Deputy, Auditor. WS1 at Sheriff: Warrants, Landlord/Tenant Corporal, Landlord/ Tenant, Transport & Security, Additional Staff. WS1 at State's Attorney: Workstation Type 2.		
		Low- WS1 at Department of Juvenile Services: Support Staff. WS1 at Family Law: Permanency Planning Liaison. WS1 at Orphan's Court: Administrative Assistant. WS1 at Court Reporters: Full Time Court Reporter., Contingents' Shared Work Station. WS1 at State's Attorney: Work Station Type 1. WS1 at Department of Social Services: Shared Works Stations, Small Work Station. WS2 at Judges: Intern. WS2 at Department of Juvenile Services: Shared Workstation. WS2 at Orphan's Court: Intern.		
	Prioritization:			
Finishes	**Base:**	Vinyl Rubber Base	**Notes:**	
	Floor:	Carpet Tile		
	Wall:			
	Ceiling:	Acoustic Panel		
Doors	**Door Type:**		**Sidelight:**	
	Door Material:		**Glazing:**	
	Hardware:		**Notes:**	
	Frame:			
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	Natural daylight ~~preferred~~
HVAC	**Heating:**	68-72oF	**Emergency Power:**	
	Cooling:	72-76oF	**Notes:**	
	Schedule:	Operating hours only		
Fire Protection	**System Type:**	Wet Pipe System	**Notes:**	
	Head Type:	Quick response; recessed heads		
Electrical - Power	**Outlets:**	(2) Duplex - Normal power	**Emergency Power:**	
	Voltage:	120V	**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	As required by code
	Level (FC):	50 fc	**Lighting Control:**	Occupancy Sensor/Switch
	Fixture Type:	Direct-Indirect	**Notes:**	Multi-zone Control
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**	Yes	**Devices:**	
	Data:	Yes	**Assistive Listening:**	No
	Wi-Fi:	Yes		
	MATV:	No	**Notes:**	
	Audio Visual:	No		
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	No	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:	Refer to Sections 4.10, for further detail.			
Equipment:				
Other Notes:	~~**Prioritization - High:** WS1 at Calendar Management, Sheriff, WA3 at Calendar Management. **Low: WS1** Dept. of Social Services, Dept of Juvenile services, Court Reporter, Family Law's Permanency, Orphan's Court, WS2- Judges, Orphan's Court.~~			

Room Data Codes:
Program Component: **Public Elevator**

General	**Min. Ceiling Height:**	9'-0"	**Notes:**	Accessible
	Acoustic:			
	Prioritization:	High		
Finishes	**Base:**	Stainless Steel	**Notes:**	Handrail at rear wall; flush stainless steel operation panel; stainless steel cab front, return transom soffits and strike.
	Floor:	Thin-Set Terrazzo		
	Wall:	Stainless Steel		
	Ceiling:	Stainless Steel / Polyol Light Panel		
Doors	**Door Type:**		**Sidelight:**	
	Door Material:	Stainless Steel	**Glazing:**	
	Hardware:		**Notes:**	
	Frame:			
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**		**Emergency Power:**	
	Cooling:		**Notes:**	See Section 4.9 for further detail.
	Schedule:			
Fire Protection	**System Type:**		**Notes:**	See Section 4.9 for further detail.
	Head Type:			
Electrical - Power	**Outlets:**		**Emergency Power:**	
	Voltage:		**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	
	Level (FC):	40 fc	**Lighting Control:**	
	Fixture Type:	Recessed	**Notes:**	See Section 4.9 for further detail.
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**		**Devices:**	
	Data:		**Assistive Listening:**	
	Wi-Fi:			
	MATV:		**Notes:**	
	Audio Visual:			
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:				
Equipment:				
Other Notes:	Refer to Section 4.9 for further detail., elevator lobby to have digital building directory			

Room Data Codes:

Judge/Staff Elevator

Program Component:

General	**Min. Ceiling Height:**	9'-0"	**Notes:**	
	Acoustic:			
	Prioritization:	High		
Finishes	**Base:**	Stainless Steel	**Notes:**	Handrail at rear wall; flush stainless steel operation panel; stainless steel cab front and return; transom soffits and strike.
	Floor:	Porcelain Tile		
	Wall:	Wood / Glass		
	Ceiling:	Stainless Steel		
Doors	**Door Type:**		**Sidelight:**	
	Door Material:	Stainless Steel	**Glazing:**	
	Hardware:		**Notes:**	
	Frame:			
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**		**Emergency Power:**	
	Cooling:		**Notes:**	See Section 4.9 for further detail.
	Schedule:			
Fire Protection	**System Type:**		**Notes:**	See Section 4.9 for further detail.
	Head Type:			
Electrical - Power	**Outlets:**		**Emergency Power:**	
	Voltage:		**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	
	Level (FC):	40 fc	**Lighting Control:**	
	Fixture Type:	Recessed	**Notes:**	See Section 4.9 for further detail.
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**		**Devices:**	
	Data:		**Assistive Listening:**	
	Wi-Fi:			
	MATV:		**Notes:**	
	Audio Visual:			
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	No
	Card Access:	Yes	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:				
Equipment:				
Other Notes:	Refer to Section 4.9 for further detail.			

Room Data Codes:
Program Component:

Custody Elevator

General	**Min. Ceiling Height:**	10'-0"	**Notes:**	
	Acoustic:			
	Prioritization:	High		
Finishes	**Base:**	Stainless Steel	**Notes:**	Stainless steel cage; stainless steel cab front, return transom, soffits and strike.
	Floor:	Sheet Vinyl		
	Wall:	Textural Stainless Steel		
	Ceiling:	Security Plank Ceiling		
Doors	**Door Type:**		**Sidelight:**	
	Door Material:	Stainless Steel	**Glazing:**	
	Hardware:		**Notes:**	
	Frame:			
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**		**Emergency Power:**	
	Cooling:		**Notes:**	See Section 4.9 for further detail.
	Schedule:			
Fire Protection	**System Type:**		**Notes:**	See Section 4.9 for further detail.
	Head Type:			
Electrical - Power	**Outlets:**		**Emergency Power:**	
	Voltage:		**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Detention Grade	**Emergency Light:**	As required by code
	Level (FC):		**Lighting Control:**	Control Panel and Central Control
	Fixture Type:	Recessed	**Notes:**	
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**		**Devices:**	
	Data:		**Assistive Listening:**	
	Wi-Fi:			
	MATV:		**Notes:**	
	Audio Visual:			
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	No
	Card Access:	Yes	**Intercom:**	Yes
	Duress Alarm:		**Notes:**	
Furnishing / Fixtures:				
Equipment:				
Other Notes:	Refer to Section 4.9 for further detail.			

Room Data Codes:
Program Component: **Service Elevator**

General	**Min. Ceiling Height:**	9'-0"	**Notes:**	
	Acoustic:			
	Prioritization:	Medium		
Finishes	**Base:**	Stainless Steel	**Notes:**	Flush stainless steel operation panel; stainless steel cab front, return transom soffits and strike.
	Floor:	Sheet Vinyl		
	Wall:	Textured Stainless Steel Panel		
	Ceiling:	Stainless Steel		
Doors	**Door Type:**		**Sidelight:**	
	Door Material:	Stainless Steel	**Glazing:**	
	Hardware:		**Notes:**	
	Frame:			
Windows	**Frame:**		**Glazing:**	
	Pass-Through:		**Notes:**	
HVAC	**Heating:**		**Emergency Power:**	
	Cooling:		**Notes:**	See Section 4.9 for further detail.
	Schedule:			
Fire Protection	**System Type:**		**Notes:**	See Section 4.9 for further detail.
	Head Type:			
Electrical - Power	**Outlets:**		**Emergency Power:**	
	Voltage:		**Notes:**	
Electrical - Lighting	**Lighting Type:**	LED Commercial Grade	**Emergency Light:**	
	Level (FC):	40 fc	**Lighting Control:**	
	Fixture Type:	Recessed	**Notes:**	See Section 4.9 for further detail.
Plumbing	**Fixture Material:**		**Water Management:**	
	Fixture Type:		**Notes:**	
	Accessible:			
AV / Telecom	**Telephone:**		**Devices:**	
	Data:		**Assistive Listening:**	
	Wi-Fi:			
	MATV:		**Notes:**	
	Audio Visual:			
Casework	**Type:**		**Notes:**	
	Material:			
	Work Surface:			
Electronic Security	**CTV Camera:**	Yes	**Door Position Switch:**	No
	Card Access:	No	**Intercom:**	No
	Duress Alarm:	No	**Notes:**	
Furnishing / Fixtures:				
Equipment:				
Other Notes:	Elevator wall protective pads and hooks at all four (4) cab walls. Refer to Section 4.9 for further detail.			

1.3 Detailed Functional Narrative

The functional narrative includes a description of functions/activities, access/adjacencies, security and special design considerations. The purpose of the narrative is to highlight operational needs specific to the Project. The narrative is not intended as a comprehensive consolidation of all planning and design requirements.

Courthouse Operational Hours:

The court functions requires after hours functionality. The Judge and Staff offices are routinely used after hours. Courtrooms may be used beyond Operating Hours for extended court sessions. The Sheriff's Office shall be operational 24/7. Mechanical systems shall include a convenient method to override the unoccupied mode. The Sheriff's Office shall remain in occupied mode 24/7. The Department of Juvenile Services has a program one Saturday a month from 9am to 12pm.

1. COURT SETS

The courtroom is the traditional center of court activity, the space where most court proceedings take place and is therefore subject to complex operational and design requirements that may vary by specific court department and use. The courtroom is the largest piece of a "court set," which includes support spaces such as attorney/client conference rooms, jury deliberation rooms, adjacent holding cells, robing rooms, and AV storage spaces.

Activities and Functions

- As the location of publicly-accessible judicial activity, courtrooms require appropriately dignified design reflecting their symbolic representation of the justice system.
- Courtrooms and hearing rooms are the only places in the courthouse where public, staff and secured circulation areas meet; therefore, all courtrooms must be securable when not in use to prevent unauthorized intrusion from one circulation area to another.
- Judicial, staff, and juror entry points into the courtrooms must be restricted from the public.
- Courtroom design considerations must be conducive to courtroom proceedings, including: clear sightlines from the judge's bench and jury box to the witness stand, court reporter, and counsel tables; clear sightlines from jurors, court reporter and counsel to evidence display; appropriate acoustic design aiding necessary communication while allowing for appropriate confidential conversations; and adequate spectator seating for the public and juror selection processes.
- Minimum of one per courtroom and Hearing Room type (Large, Standard, Civil Hearing Room) must be fully accessible, including all staff locations.
- The judge's location at the bench shall be three steps up from the floor.
- The judge and clerks' locations in the courtroom must be equipped with duress alarms.
- Microphones must be provided for the judge, witness, jury and counsel table for the purpose of court recording.
- The witness box in the courtrooms shall be elevated two steps up from the floor. If acceptable sight lines can be demonstrated, the witness box may be one step above the floor.
- All courtrooms must accommodate jury trials with a jury box and jury deliberation room for each courtroom. The standard and large courtrooms require capacity for 12-person juries with four alternates, and the civil courtrooms must accommodate six-person juries with two alternates.

- Jurors must have clear sightlines from the jury box to the judge's bench, witness box and court reporter. The jury box may have two rows of seating with a wheelchair-accessible location in the front row. If there are two rows, the back row shall be a step higher than the front row.
- Judge, clerk and witness stands must be designed with ballistic panel assemblies (minimum of level 2).
- Provide two spaces (chairs) for Sheriff Deputies in the courtroom. Provide one space (chair) for the Bailiff near Jury. Provide one space (chair) for the Law Clerk in Courtroom (does not have to be on bench).
- It is acceptable for the Clerk and the Reporter to sit adjacent to each other.
- A white noise masking system must be provided at the jury box area and all spaces outside of the jury deliberation room.
- All courtrooms require a vestibule between the courtroom and the public corridor as a sound buffer against general noise from outside of the courtroom.
- The public corridor/courtroom waiting area shall include a digital screen near the entrance to each courtroom for displaying the court docket for each courtroom.
- All courtrooms must have two attorney/client conference rooms–one standard and one large. These conference rooms allow for confidential conferencing in a closed room rather than the corridor outside of the courtrooms, and may also be used as victim or witness waiting rooms during court proceedings. Access to these rooms shall be controlled by the courts.
- Audio-visual (AV) closets are to be accessed from restricted circulation. These closets must hold two AV equipment racks per pair of courtrooms, but may be separated as single AV closets, one per courtroom, during design of the court sets.
- Modern court operations incorporate technology in the courtroom, ranging from common computers and laptops to evolving evidence presentations, video conferencing, and technologically equipped jury boxes. Thus, courtroom design must allow for flexibility and continuing advancement of technology.
- All courtrooms must accommodate video and audio conferencing.
- All courtrooms shall have dedicated storage space.
- Jury deliberation rooms must be restricted from public circulation, ~~preferably~~ they shall be located adjacent to or in poximity to their respective courtrooms. If possible, jury access to the deliberation rooms via a restricted corridor that does not require traversing a courtroom shall be considered for occasions when jurors need an alternate route to a deliberation room, such as when their assigned courtroom is inaccessible or a particular case's sensitivity requires jurors to be separated from the public waiting outside of a courtroom.

- Jury deliberation rooms must be acoustically isolated to ensure confidentiality during deliberation.
- Robing rooms are provided at each courtroom as a small office for judges to use during court proceedings. Robing rooms must be accessed via restricted circulation adjacent to their respective courtrooms. A judge's toilet is provided at each robing room.
- Standard and large courtrooms must have access to central holding and adjacent courtroom holding cell areas, and are intended to be "paired" around a shared holding area, which must have three cells with sight and sound separation to keep male, female and juvenile in-custodies separate. Civil courtrooms require access to adjacent holding areas. Non-contact interview booths are not required in the courtroom holding area.
- Bailiffs are needed for jury trials and shall sit outside of the Jury Deliberation Room.

Functional Relationships

- All courtrooms are accessed from public corridors.
- Large, Standard, and Civil courtrooms requiring accused access must be adjacent to a secure courtroom holding area with access to central holding via secure circulation.
- Secure holding elevators must be as close as possible to ~~Civil~~ courtroom holding in order to minimize transport along secure circulation corridors.
- The Judiciary is on the State data system.

2. HEARING ROOMS

Hearing rooms provide space for magistrates and visiting judges to preside over court cases that do not require juries, do involve persons that are in-custody, and have a generally low volume of spectators and court proceeding participants. The settlement conference room is planned as a space for civil court mediations, but may also be used as a shared conference room for the court's use if available.

Activities and Functions

- As the location of publicly-accessible judicial activity and importance as a symbolic representation of the justice system, hearing rooms require appropriately dignified design reflecting the importance of the courts.
- Judicial and staff entry points into the hearing rooms must be restricted from the public.
- Courtrooms and hearing rooms are the only places in the courthouse where public, staff and secured circulation areas meet; therefore, all courtrooms must be securable when not in use to prevent unauthorized intrusion from one circulation area to another.

- Hearing Room design considerations must be conducive to hearing proceedings, including: clear sightlines from the judge's bench to the witness stand, court reporter, and counsel tables; clear sightlines from court reporter and counsel tables, appropriate acoustic design aiding necessary communication while allowing for appropriate confidential conversations.
- Settlement rooms conduct civil cases which have a high volume of traffic.
- Settlement rooms shall have digital recording.
- The judge's position in the hearing room shall be one step up from the floor.
- The judge and clerks' locations in the hearing room must be equipped with duress alarms.
- Microphones must be provided for the judge, witness, and litigants for the purpose of court recording.
- A vestibule between the Hearing Room and the public corridor is required as a sound buffer against general noise from outside of the courtroom.
- All Hearing Rooms must have two attorney/client conference rooms. These conference rooms allow for confidential conferencing in a closed room rather than the corridor outside of the courtrooms, and may also be used as victim or witness waiting rooms during court proceedings. Access to these rooms shall be controlled by the courts.
- Audio-visual (AV) closets are to be accessed from restricted circulation. These closets must hold two AV equipment racks per pair of courtrooms, but may be separated as single AV closets, one per hearing, during design of the hearing rooms.
- Modern court operations incorporate technology in the hearing rooms, ranging from common computers and laptops to evolving evidence presentations and video conferencing. Thus, hearing room design must allow for flexibility and continuing advancement of technology.
- All hearing rooms must accommodate audio and video conferencing.

Functional Relationships

- Hearing rooms are accessed from both public and restricted circulation.
- The settlement room is accessed from public circulation
- Hearings rooms must have cells adjacent to and accessed by central holding. Two of the three hearing rooms may be "paired" around a shared holding area, which may have two cells with sight and sound separation to keep male, female and juvenile in-custodies separate. Non-contact interview booths are not required in the hearing room holding area.

- Hearing rooms shall be adjacent to a secure courtroom holding area with access to central holding via secure vertical circulation.

- The judiciary is on the State data system.

3. JUDGES

Judicial chambers are the office hub for the judiciary and their support staff. Chambers must be planned as a collegial grouping of offices, which offers the benefits of shared support space and staff, as well as regular interaction between judicial colleagues.

Activities and Functions

- Judicial chambers must be located in a restricted circulation area in the courthouse with controlled access. Judicial entry into the courthouse and movement throughout the building must be separate from the general public.

- Judicial chambers must be planned as collegial, with a shared support space area that includes a main reception area for visitors, conference room, and kitchenette. The intent of a "collegial group" is to represent a Judge Chamber suite in order to gain efficiency through the sharing of support spaces. The number of judges in one collegial office area shall depend on available floor area at the chambers floor. No more than two judges shall be included in a collegial group.

- Provide direct access from judges' enclosed, secured parking to the judge's elevator.

- Each judge's chamber has space for a judge, 1 secretary, 1 law clerk, and 1 intern, in addition to a copier/supply storage area, file space, coat closet, and judge's toilet. The staff attorney shall be located with the visiting Judges.

- Visiting judges are located together in a suite. The visiting judges' office area may be separate or combined with the other collegial chambers, to be determined in design.

- Every judicial chamber must be equipped with a duress alarm in the Judge's office and at the reception desk.

- Any one of the sitting Circuit Court Judges could be designated as the Administrative Judge. There is no distinction between the space requirements for a Judge whether "sitting" or "administrative".

- There are three levels of Courts including Court of Appeals, Court of Special Appeals, and Circuit Courts. The Judges in each level shall not be adjacent to Judges of another level (i.e. Court of Appeals Judges shall not be adjacent to Court of Special Appeals Judges or Circuit Court Judges). ~~There is no preference to the location of~~ Appellate Judge Chambers ~~and they~~ may be on the same floor as Circuit Court Judges.

- There are 3 Appellate Chambers (2 special appeals judges and 1 appellate judge), each with space for the judge, 1 secretary, and 1 law clerk, in addition to a copier/supply storage area, file space, coat closet, and judge's toilet. Appellate chambers may share their own kitchenette. The Appellate judges' chambers may be separate or combined with the other collegial chambers, to be determined during design phases.

- Visiting judges must have their own suite and this suite can be located near/adjacent to collegial chambers. The appellate judges shall not be adjacent to collegial chambers. Chambers are to share secretarial, file, and copy room space. A solid wall needs to separate collegial chambers from a corridor. The judge's chamber shared support space is intended to be shared by the collegial judicial suites.

Functional Relationships

- Judicial chambers shall be conveniently proximate to courtrooms and hearing rooms, with access via a judges' corridor and/or elevator.
- All judicial chambers must be restricted from the public with controlled access. An advantage to the use of collegial chambers is the ability to design a single reception area, which acts as a buffer between visitors and the judiciary. In a situation where collegial chambers are on more than one floor, they shall be connected with stairs.
- The judiciary is on the State data system.
- Appellate judge chambers cannot be located near the sitting judge chambers or Court of Appeals judges. (2 special appeals judges/1 appellate judge).

4. MAGISTRATES

Magistrate offices include office work space for magistrates and their support staff and must be planned as a collegial grouping of offices, which offers the benefits of shared support space and staff as well as regular interaction between judicial colleagues.

Activities and Functions

- Magistrates hold proceedings in domestic and juvenile cases and make recommended findings to a judge. Magistrates are scheduled for court on a daily basis. They review pleadings, prepare for dockets, and draft orders.
- Magistrate offices must be located in a restricted circulation area in the New Courthouse with controlled access. Magistrate entry into the courthouse and movement throughout the building must be separate from the general public.
- Magistrate offices must be planned as a suite (i.e. collegial grouping). Each magistrate must have their own office and toilet. Three (3) Magistrate Administrative Assistants are pooled in one area and share support including a copier, supply storage, files, coat closet and a kitchenette. This area is shared by the Magistrates.
- Every Magistrate office and adjacent reception desk must be equipped with a duress alarm.
- Space permitting, the magistrates may be combined with the other collegial chambers but in a separate area within the collegial chambers floor, to be determined during design phases.

Functional Relationships

- Magistrate offices shall be conveniently proximate to the hearing rooms where magistrates may typically work.
- Magistrate offices must be restricted from the public with controlled access.
- Magistrates may be located on the same floor as Judge Chambers.

5. COURT ADMINISTRATION

Court Administration, with direction from the Administrative Judge, has final responsibility for maintaining court operations related to budget and finance, human resources, technology, policy, procedures and case flow. The Docket System shall use the Infax System.

Activities and Functions

- A public counter and waiting area can be shared with Family Law.
- A shared conference room/training room is shared for all departments and must be equipped with sufficient power and data. Digital white board and AV equipment shall be included.

Functional Relationships

- The Court Administration area oversees all court activity and shall be proximate to the Calendar Management office.
- The Court Administrator has regular interaction with the judiciary and shall be conveniently accessible to the judicial staff.
- The shared conference room shall be accessed from staff restricted circulation.
- Court Administration, Family Law, Calendar Management and Court Reporters shall be adjacent and can share one waiting room.

6. CALENDAR MANAGEMENT

Calendar Management performs all assignment and case management functions for the court, including court events scheduling, posting dockets, tracking leave, managing calendars, and monitoring case flow.

Activities and Functions

- With direction from the judiciary, Calendar Management assigns courtrooms, manages dockets and coordinates court calendars.
- A public counter and waiting area is needed.

Functional Relationships

- Calendar Management works closely with Court Administration and shall be adjacent to the Court Administration area.
- Calendar Management also has significant crossover with Family Law and shall be located in close proximity to the Family Law area.
- Convenient proximity to the settlement conference room is preferred to help Calendar Management administer the scheduling and usage of the room.

7. FAMILY LAW

The Family Law office manages all domestic and juvenile cases as they are processed through the court system. It is a resource dedicated to responding to family law case procedural inquiries and managing a family law assistance program that provides alternative dispute resolution services, custody evaluations, assistance to self-represented family law litigants, and connections for the public with family-related services and resources.

Activities and Functions

- Family Law reviews all domestic and juvenile case files, schedules events, assigns cases to Magistrates, sends notices and correspondence, and works with the Deputy Court Administrator to process cases through status hearings and schedule conferences.
- Family Law and Calendar Management can share one public counter and waiting area.
- A significant amount of Family Law staff time is dedicated to answering phone queries from the public.
- Family Law also runs clinics, family law assistance programs, and trainings.

Functional Relationships

- The public needs to access the Family Law office in order to obtain information about family law services, meet with the court social worker or other staff, and report for mediations. A public counter and waiting area is needed.
- The interview room and conference room must be accessible from the waiting area without requiring public to move through the staff space. These rooms must include sound attenuation to ensure confidentiality.
- The interview room must have two-door access from the public waiting and staff work space. The door from the staff area must be equipped with card reader to restrict access from the public.

- Due to the potential volatility of family law matters, particularly in the context of mediation, the office shall be equipped with duress alarms, and the office must be observable by courthouse security staff.
- Family Law has significant crossover with Calendar Management and shall be located in close proximity to the Calendar Management area.
- Convenient access to the Law Library from the Family Law office is desirable (but not required) to facilitate use of the library for public assistance programs.

8. CLERK OF THE COURTS

The Clerk of Court's office is responsible for a wide range of court operational functions from case filing intake and records management to court docket processing and courtroom staffing. Clerk operations have a public component, including customer service and payments windows, but are mainly internally focused in direct support of court staff and the judiciary. The Clerk of the Courts maintains three divisions: Criminal/Juvenile, Civil, and Land Records/Licensing.

Activities and Functions

- All Circuit Clerk functional space shall be consolidated at one location with the objective to maximize staff efficiency and supervision, create opportunities to cross-train staff, provide optimal customer service to the public, and manage a safe staff environment.
- Most Circuit Clerk areas are staff intensive and shall be planned and designed with indoor environmental quality, including adequate support space, durable and appropriate architectural finishes and furniture, and access to natural daylight.
- Staff areas, including the Clerk of Court's office, must be restricted from the public, but shall be accessible to other staff divisions.
- Courtroom Clerks spend much of their time in a courtroom during court proceedings, but they also require dedicated workstations in the main office area where they can perform most of their duties outside of the courtroom.
- Most file records are planned for storage in fixed open shelving units. Juvenile records require additional security and are kept in locked file cabinets. Filing area shall be flexible to be re-purposed as files move to an electronic format.
- Court exhibits are retained by the court clerks with photos and presentations stored until a case's appeal time has expired. Sensitive items, such as firearms and narcotics, are held only during an active trial and turned over to the Sheriff for storage after the trial.
- The computer server rack must be located in a climate controlled area.

- Public counters are serviced by rotating clerk staff who move from their workstations to the counter during their shift. While some clerks may be designated for full-time counter responsibilities, they shall still have a workstation independent of the counter station to allow for non-counter-related task work space, and to allow other clerk staff to back up the regular counter posts.
- The public counters shall require a barrier between the clerks and visitors with a pass through in order to help maintain a secure separation between the restricted staff area and the public.
- The public counter and reception area must have adequate space for a counter queuing area and kiosks where public-access computer terminals are available for public record look up or other court-related computer research.
- Each position at the public counter must be equipped with a duress alarm.
- A small children's play area shall be located in the public waiting area.
- There must be clear sightlines for the staff to observe the public viewing files in the public area to assure the integrity of the files.
- All counter stations must accommodate payment collection. A safe for securely storing case payments is required.
- Marriage License applications are obtained from the Licensing/Land Use division, while marriages are performed by the Clerk of the Courts at the courthouse in a room that is used exclusively for marriage ceremonies. The marriage ceremony space and associated waiting does not require direct adjacency to the clerk's office, but proximity would be ideal.

Functional Relationships

- The Clerk of Court public counters and computer terminals have a relatively high-volume of public visitors and close proximity to the entrance lobby must be a priority.
- The Clerk of the Circuit Court's office may also be proximate to the Law Library where the public may be directed for assistance navigating the court system.
- The Clerk of the Courts shall have access to secure circulation to reach Courtrooms.
- Proximity to Calendar Management is also desired, but not required.

9. & 10. REGISTER OF WILLS AND ORPHAN'S COURT

The Register of Wills appoints personal representatives and oversees the administration of decedents' estates, collects fees and inheritance taxes, and serves as clerk to the Orphans' Court. The Orphan's Court is programmed as part of the Register of Wills.

Activities and Functions

- As the location of publicly-accessible judicial activity and importance as a symbolic representation of the justice system, the Orphan's courtroom requires appropriately dignified design reflecting the importance of the courts.
- Courtroom design considerations must be conducive to courtroom proceedings, including: clear sightlines from the judge's bench to the witness stand, court reporter, and counsel tables; appropriate acoustic design aiding necessary communication while allowing for appropriate confidential conversations; and adequate spectator seating for the public.
- Register of Wills and Orphan's Court shall not be located adjacent the Department of Juvenile Services.
- Orphan's Court Judges sit as a panel of three and deliberate together. A joint conference room is provided for them to deliberate and store their belongings.
- There must be a public counter for customer service in a reception area, which is accessible from public circulation. The reception area includes kiosks where public-access computer terminals are available for genealogy research.
- Staff areas are to be restricted from public access without staff consent.
- A conference room is planned for the Register of Wills office area, but this conference room may be shared with other departments.
- Storage for wills must be fire-proof.
- Orphan's Court is held one day per week.
- A vestibule between the Orphan's courtroom and the public corridor is a sound buffer against general noise from outside of the courtroom.
- The courtroom must have an attorney/client conference room. These conference rooms allow for confidential conferencing in a closed room rather than the corridor outside of the courtrooms, and may also be used as victim or witness waiting rooms during court proceedings. Access to these rooms shall be controlled by the courts.
- Audio-visual (AV) closets are to be accessed from restricted circulation. These closets must hold two AV equipment racks per pair of courtrooms, but may be separated as single AV closets, one per hearing, during design of the hearing rooms.
- The Orphan's Court uses the "Executive Branch" computer network which is separate from the County and State computer system. The A/V Evidence Recording System must be able to "toggle" between the Orphan's Court System and Circuit Court System.
- Judicial and staff entry points into the Orphan's courtroom must be restricted from the public.

- Courtroom design must allow for flexibility and continuing advancement of technology.

Functional Relationships

- The Register of Wills office area shall be adjacent to or conveniently proximate to the Orphan's Courtroom.
- The office shall be close to the public lobby.
- The Register of Wills has minimal interaction with the courts.

11. COURT REPORTERS

The Court Reporting Unit is responsible for the recording of all "on the record" courtroom events. Their transcripts become public records and are a resource for the courts. Court reporting is necessary for real time records, and is augmented by digital audio recording in the courtrooms.

Activities and Functions

- All court reporter space shall be consolidated in one area of the courthouse.
- A private office is needed for the supervising court reporter with direct adjacency to other court reporter staff. All other full-time court reporters shall be in a shared office with open workstations.
- An office for contingent court reporters is needed and must include a shared workstation and conference area with lockers.

Functional Relationships

- Court reporters' office area shall be conveniently proximate to the courtrooms.
- Court reporter shall be located in close proximity to Court Administration.

12. LAW LIBRARY

The law library is a court resource for the public and attorneys to research legal matters, access legal resources, and receive assistance navigating the court system.

Activities and Functions

- Runs legal clinics, provides resources for computerized and printed legal research, and provides reference services.
- Legal clinics are run by volunteer attorneys in the library, for which a conference room is needed.
- Most library space is dedicated to "people space" where active research is performed, including computer kiosks, work tables and kiosks.

- The librarian requires a private office, with a view into the library for supervising library activity.
- An attorney lounge/work room shall include space for shared workstations used primarily by attorneys with ongoing courthouse work who are not associated with other groups that are provided with space in the courthouse. This work room is intended as a work resource and not as a place for client consultations and interviews, which may occur in the attorney/client conference rooms planned as part of the courtroom support space for all courtrooms. The work room shall include lounge seating and work tables.

Functional Relationships

- The law library is located off of public circulation and shall have convenient public access from the building entrance.

13. JURY ASSEMBLY

The jury office manages the jury process and is responsible for summoning and administering the public to serve as potential jurors, as needed by the courts. Services for the public include juror check-in, processing, service payments, issuing summons and excusing service.

Activities and Functions

- Office space is required for Jury Commission staff to: create, distribute and process jury summons, manage jurors at the courthouse, respond to judicial needs regarding jury panels, provide juror customer service, and conduct other administrative functions.
- As a space where jurors report to the courthouse to fulfill their required jury service, the jury assembly room must be a positive representation of the courts and the judicial system. Wayfinding to the jury assembly room must be clear, juror waiting areas must allow for comfortably spaced seats, and the room must include natural daylight.
- The Jury assembly room must have a counter station for juror check-in and in-person inquiries.
- Juror waiting shall offer a mix of seating options with most jurors waiting in an open seating area. However, accommodations shall be made for jurors waiting potentially long periods of time for juror panel requests from the judges, including seating in a quiet room or lounge. A vending area is required.
- Circuit Court Bailiffs support and supervise jury panels. Lockers are provided in a staff area for the storage of their personal belongings.
- Provide numerous charging tables/stations spread around the jury area for charging of cell phones and laptops for waiting jurors.

Functional Relationships

- The jury assembly room shall have convenient access from the entrance lobby to minimize the distance traveled for reporting jurors.
- Jurors requested for jury selection (voir dire) need to move in groups that may range in size from 30 to 75 jurors, as determined by the presiding judge for a particular case. These pre-selected jurors shall have convenient access to the jury courtrooms in order to minimize the travel time to the courtrooms, and they shall move mainly through public corridors.
- Selected (sworn) jurors shall have a means for accessing their assigned courtrooms without moving through public corridors, particularly in front of the courtrooms where parties associated with a court case may try to intimidate or influence the jurors. An alternative route to the courtrooms could be via restricted circulation accessible from the jury assembly room or staff-only circulation.

14. SHERIFF

The Howard County Sheriff's Office serves the courts and the community. In respect to the courts, the Sheriff serves warrants, provides accused transportation to and from the courthouse, maintains security in the courthouse and courtrooms, manages central holding at the courthouse, and moves the accused between central holding and the courtrooms.

The Sheriff's central administrative office provides civil process through background investigation, education, training, the landlord/tenant unit, the domestic violence unit, and the warrant unit which serves warrants for the Circuit Court.

Activities and Functions

Administrative Functions

- Sheriff's Office Suite
- Fleet/K9/Quartermaster
- Education and Training
- Administrative Services, including offices and workstations
- Warrants Unit
- Landlord/Tenants Unit
- Domestic Violence Unit
- Specialty storage spaces include a gun safe, armory, quartermaster storage, animal holding facility, property room, and evidence room

- Support spaces include a conference room, lockers, toilet, break room, copiers, and file storage.
- Sheriff is on the County data system.

Courthouse Security and Staff Support

- An officer waiting area is required for all transport personnel, including Sheriff's transport officers and officers from other jurisdictions. This area must have seating for twelve, a television, and work-space.
- Separate male and female locker rooms must have full-size lockers, staff toilets adjacent to lockers, and staff showers.
- The muster room is a dedicated roll call area and is also ~~be~~ used as a staff break room with an adjacent kitchenette. The Duty Officer and training office shall be adjacent to the muster room.
- Courthouse activity shall be monitored through cameras in the Security Control Room, which shall be proximate to other Sheriff support spaces such as the Muster Room and locker rooms. Door control access at secure points of secured movement shall also be maintained from the Security Control Room. The Security Control Room must have three monitoring stations for staff.
- A charging station for radios must be located within the muster room.
- A security equipment room adjacent to the control room must include a secure server and LAN separated from other courthouse technology systems, in addition to storage space for radios, restraints and other security equipment.

Central Holding and Secured Movement

- All areas where the accused are present must be secure, with the accused under surveillance at all times. When not in a holding cell or in a courtroom, the accused are escorted by Sheriff personnel through secure circulation areas.
- The accused must enter and exit the courthouse via a secure vehicular sally port, sized to accommodate two, large transport vans and additional staging and maneuvering space. The secure vehicle sally port must be designed to accommodate indoor prisoner transfer. Sally port shall be sized to accommodate two large transport vans. Van dimensions are approximately 8' wide x 28' long at a minimum.
- A pedestrian sally port connects the vehicular sally port to the courthouse and leads into the central holding area. Access to and from the vehicular sally port shall be controlled remotely from the central control room.
- Firearms are not permitted into the central holding area; a gun loading/unloading station and locked fire arm storage must be provided at the vehicular sally port.

- Control room must have direct sight line to processing, pedestrian sally port and vehicular sally port. Holding-Processing shall be connecting to both adult and juvenile holding.
- Adult and juvenile accused must always have sight and sound separation. Male and female accused must also have sight and sound separation.
- All cells must be "wet cells," furnished with detention grade benches and sink/toilet combo units.
- All central holding and courtroom holding areas are monitored remotely from the central control room.
- Attorneys may meet with in-custody clients at the non-contact visitation booths.

Functional Relationships

- Sheriff administrative offices do not require direct adjacency to the central holding area.
- Central holding must have secure vertical connections to courtrooms requiring accused access via accused elevators that open directly into courtroom holding areas adjacent to courtrooms.
- Public access shall be provided to the attorney client interview room without going through sheriff staff area.
- Staff support area for the courthouse security team is in a staff restricted area with convenient proximity to the central holding area. The locker rooms and muster rooms must be outside of the secure central holding circulation area.

15. STATE'S ATTORNEY

The State's Attorney is the primary prosecutor and handles the prosecution of all criminal offenses that occur in Howard County, the majority of which are State law violations.

The State's Attorney also conducts grand jury sessions. A grand jury is responsible for determining whether or not criminal charges may be brought in felony cases. A grand jury size is typically 23 jurors, including alternates. Though used extensively by the State's Attorney's Office, the grand jury room is wholly in the jurisdiction of the courts.

Activities and Functions

- Visitors to the State's Attorney's office include victims, witnesses, law enforcement officers, and investigators. The office is accessed from public circulation, but the interior of the office area must be secure to protect the safety of State's Attorney staff and visitors, as well as the confidential matters within the office area.

- There are separate visitor waiting areas on either side of the public counter. The larger waiting areas are for admitted visitors, who enter past the public counter to separate juvenile and adult waiting rooms, both of which must be out of sight from the public corridor. Police shall also have a separate waiting area.
- Visitors shall not be admitted to staff areas or areas beyond waiting rooms without staff admittance and escort.
- Conference rooms, interview rooms and attorney offices must be a confidential environment with appropriate soundproofing for the sensitive nature of meetings and prosecutor work.
- The evidence storage room must be secure and climate controlled.
- Adult and juvenile records must be kept separate. All files must be secure and confidential.
- The computer server rack must be located in a climate controlled area.
- The grand jury room design must ensure that all jurors have a clear view of the prosecutors, witnesses, and evidence. Tiered seating shall be used to enhance views.
- Grand jury matters are of a very sensitive and confidential nature, and at times may involve high profile cases. It is very important that jurors have a means of accessing the grand jury area without coming in contact with defendants or other interested parties in the cases. Movement into the grand jury area must also be controlled by security staff to ensure the integrity and safety of grand jury participants.
- The grand jury room must be equipped with current technology, particularly for evidence presentation, but shall be designed for adaptability to future technology. The Grand Jury Courtroom requires digital audio recording.
- The grand jury bench shall be on a platform one step above the floor.
- A waiting area for victims and witnesses requires confidentiality from the general public, many of whom may be informants requiring secrecy, threatened victims and/or witnesses, or others whose presence may put themselves or others at risk.
- Grand jurors must have access to adjacent ancillary space, including a kitchenette and toilets.
- State's Attorney is on the County data system.

Functional Relationships

- The State’s Attorney's office is accessible from public circulation, but shall not be directly adjacent to the courtrooms, judges, or Public Defender.

- A secure entrance to the courthouse and restricted corridor to the State's Attorney's office must be provided to allow for entrance for persons requiring discreet access, such as victims, witnesses, undercover law enforcement personnel, etc. Once entering the secure circulation, there must be access to the State's Attorney's offices and Courtrooms (Grand Jury Room) without entering public circulation. Those entering through the secure entrance must still go through security checks.
- The grand jury area is used extensively by the State's Attorney's Office. If possible, State's Attorney's space in the courthouse shall be proximate to the grand jury room for the convenience of the State's Attorney staff.
- Jurors serving in Grand Jury Room shall have convenient access from the jury assembly room, where jurors may have customer service-related matters.
- Jurors must have a separate entrance to access the grand jury area; ideally, this access would be via restricted circulation so as to avoid mixing with the general public and parties associated with a court case who may try to intimidate or influence the jurors.

16. PUBLIC DEFENDER

The Public Defender office provides legal representation to indigent persons (adults and juveniles) who are either the subject of a criminal investigation or are faced with a criminal charge. Though the Public Defender's main offices are not in the courthouse, some conference and work space is needed within the building to provide a confidential environment for case work during active court proceedings.

Activities and Functions

- Two dedicated, lockable spaces must be planned for the Public Defender, one near a Circuit courtroom and the other near a juvenile courtroom.
- Each space must function as a conference room for 6 people, but shall also be used as a satellite office for on-site case work by Public Defender attorneys engaged in courthouse activity.
- Each space shall have file storage, phone and video-conference capability.
- Public Defender is on the County data system.

Functional Relationships

- The Public Defender spaces must be accessible from public circulation and proximate to a Circuit courtroom and a juvenile courtroom so that attorneys can be quickly summoned back to their active courtrooms as needed.
- It is acceptable to use the Judge Secure Entrance as the Secure Entrance.

17. DEPARTMENT OF JUVENILE SERVICES

The Department of Juvenile Services works with Juvenile Probation and after care services to intervene, testify, and make recommendations to the Courts. They also interview families at the courthouse.

Activities and Functions

- Typical activities in the office area include case work research and preparation, liaising with case-related parties and the Courts, and interviews with families.
- A waiting area for 15 people shall be provided, with additional space to accommodate a children's/juvenile play area. Children as young as 8 years old can be in the system, and families often come with their younger children as they wait for the proceedings.
- Conference rooms and interview rooms must be a confidential environment appropriate to the sensitive nature of meetings and case work.
- Two conference/interview spaces are required – one larger that seats at least 12 with adequate space in the room for a probation agent to work while waiting to testify. No AV is required in these rooms. These spaces could also be shared with other departments as scheduling allows.
- A drug testing room is required for drug tests ordered by the court the same day. It must be large enough to include accommodation viewing during the sampling, and space for secure storage of samples.
- Storage is needed for Global Positioning Satellite (GPS) equipment, like ankle bracelets.
- The computer server rack must be located in a climate controlled area.
- Visitors shall not be admitted into the staff area or any other area beyond the waiting rooms without staff admittance and escort. A public counter must be designed to facilitate physical separation between the visitor waiting area and staff areas.

Functional Relationships

- The Department of Juvenile Services shall be proximate to the juvenile courtroom and public defender room.
- Proximity to the State's Attorney's Office is desirable, but not required.
- The majority of juvenile cases are heard in the Hearing Rooms. The Department of Juvenile Services shall be proximate to the hearing rooms.

18. DEPARTMENT OF SOCIAL SERVICES

The Department of Social Services offers a variety of services, including child, family, and adult services (adoptions, foster parenting, child protective services, adult protective services, etc.), child support enforcement, and economic assistance. They are involved with the courts mainly in matters of child support and family issues involving child protective services.

Activities and Functions

- Typical activities in the office area include case work research and preparation, liaising with case-related parties and the Courts, and interviews with families.
- Visitors shall not be admitted into the staff area or any other area beyond the waiting rooms without staff admittance and escort.
- A public counter is needed for Child Support Enforcement to process payments. Otherwise, walk-up public access is typically not required. The public counter/window could be shared with another department.
- Shared offices and workstations shall be needed for staff reporting to court each day.
- There must be a dedicated conference room near the courtrooms with adjoining waiting providing a place for children to sit while discussions with families are completed. A second conference room is also required and can be located with the office suite. Both shall have video conference capability, as foster children may be in other counties with relatives while a case is being adjudicated.
- The conference rooms must be a confidential environment appropriate to the sensitive nature of meetings and case work.
- Space is needed for temporary file storage; no long term storage required.
- The computer server rack must be located in a climate controlled area.

Functional Relationships

- The Department of Social Services shall be proximate to the Hearing Rooms.

19. BAR ASSOCIATION

The Howard County Bar Association is a professional organization that works to promote excellence in law practice and justice administration. It presently has no space in the existing courthouse. When allocated a space in a courthouse, bar associations typically provide work space for attorneys working in the courthouse who are not staffed there, which allows attorneys to more efficiently engage in active court cases and be readily available to the judiciary during a trial.

Activities and Functions

- An attorney lounge/work room shall include space for shared workstations used primarily by attorneys with ongoing courthouse work. This work room is intended as a work resource and not as a place for client consultations and interviews, which may occur in the attorney/client conference rooms planned as part of the courtroom support space.

Functional Relationships

- The attorney lounge and mediation space shall be accessible from public circulation, but there are no necessary adjacencies. Proximity to the law library would be convenient.

20. BUILDING SUPPORT

Building support includes the space requirements necessary for the functioning of the courthouse, such as building entrance security, shared restrooms, building system closets, maintenance and custodial space.

Activities and Functions

- The public entrance to the courthouse must be designed in a way that emphasizes the dignity of the Courts and the first impression the public has of the courthouse interior, and also promotes a secure environment that minimizes potential security and safety hazards as much as possible.

- The queuing area for the security screening stations must be protected from inclement weather and be sized to accommodate the anticipated typical peak number of visitors. Given that many visitors to the courthouse are likely reluctant visitors and may be experiencing negative feelings associated with interaction with the justice system, it is important that the queuing environment not add to stress or anxiety that visitors may already be feeling.

- In addition to building code requirement, an additional single, accessible, unisex public toilet must be provided.

- Provide an entrance vestibule prior to the security screening area. The entrance vestibule shall have doors to the security screening area that can be locked (preventing entry into the screening area) by the duress alarm in the security screening and have push button release from the security screening for after hours. The queuing for the security screening and security screening area shall be surrounded by a ballistic glazing assembly (minimum level 2) to a minimum 8’-0" high including frames and walls. The security screening area shall be fully enclosed and fully separated from the lobby with a ventilation system isolated from the rest of the building. If the top of the wall separating the screening and lobby is below the Lobby finished ceiling, the screening area shall have a ceiling to allow a ventilation system isolated from the rest of the building. The security screening area shall have doors to the main lobby that can be locked from the duress alarm in the screening area and security control room. Provide card access for after-hours access. Any exit only provisions must be viewable from the screening area.

- Exterior Lobby walls, and first floor glazing accessible by the public from the building exterior, shall have a ballistic glazing assembly (minimum level 2) to a minimum 8'-0" high.

- There must be clear sightlines to the public entrance, queuing area, and screening stations from designated officer posts in the lobby for secure supervision.
- Security screening must include a minimum of three x-ray machines and three magnetometers.
- The entrance lobby area shall include an information desk, which must be clearly visible to visitors immediately after passing through the security screening stations.
- A minimum of four digital dockets must be located in the entrance lobby.
- Provide digital building directory at elevator lobby
- The building service access point into the facility must be restricted to authorized vehicles only.
- A loading/receiving area must be planned for the receiving of goods and equipment, which includes space for delivery staging.
- Maintenance shop space must be adequately ventilated.
- Public and staff restrooms, janitor's closets, telecom, electrical and security closets must be distributed in appropriate locations in the facility, to be determined during design. The actual size and number of these rooms requires validation as they shall be impacted by building layout and building codes.
- The media room must be planned for flexibility in technology capability to allow for evolving technology needs and future possible changes in media policy. There shall be one media room near the main entrance with a lectern, blue drape on walls, and a media evidence viewing room located near the courtrooms.
- Central mail room to be equipped with ductless fume hoods, sink, eye wash station, duress alarm and security camera. Provide portable detection devices for biological, chemical, radiological, and containment receptacles for mail storage. County will provide a large capacity x-ray mailscreening approximately 330lb 17"x24"
- The Cafeteria must include adequate power and gas connections for cooking and food storage, including: stove, oven and grill equipment; cold and frozen food storage; and other necessary food preparation equipment.
- The kitchen hood and fire suppression system in the Cafeteria shall remain the responsibility of the Project Company.
- The County shall pay directly to build out the kitchen, including equipment, in coordination with a future Cafeteria vendor in accordance with section 7.13 (A) of this Project Agreement.
- The kitchen areas in the Cafeteria must include sink and dish washing facilities.
- The kitchen areas in the Cafeteria where food is cooked must include adequate ventilation.

- The Cafeteria, including the kitchen and Outdoor seating shall be located outside the secure perimeter with no access to the secure area of the building. Provide a fully grouted concrete masonry unit wall separation. Anyone leaving the secure to utilize the Cafeteria must re-enter through the main entrance security. Cafeteria area shall be in the proximity of the main entrance to provide convenient access.
- An emergency generator must provide continuous power and HVAC on all days and at all times to the central holding areas, one courtroom, life safety systems, and egress routes.

Functional Relationships

- The security office must be adjacent to the entrance lobby.
- There must be clear separation between the entrance security queuing area and the route exiting the courthouse.
- One staff Wellness Room shall be accessed from staff restricted circulation. Another public Wellness Room shall be located near the jury room.
- The central mail room must be accessible from staff restricted circulation with convenient proximity to the service entrance to the courthouse.
- Trash and recycling rooms must be adjacent to the loading area.
- The maintenance office and shop may be located in close proximity to mechanical equipment areas.
- Maintenance storage and bulk storage shall have convenient access from the loading area to minimize transport distance of heavy equipment and deliveries.
- The cafeteria shall have convenient access from public circulation and be located outside the secure area. However, the cafeteria shall not be immediately adjacent to the entrance lobby unless there is adequate circulation and acoustic separation from the lobby to prevent excessive movement and noise in the lobby.

2. PROJECT SITE DESIGN REQUIREMENTS

2.1 Project Site Area Diagrams

Project Site Design Considerations

A Successful Vision for the Community

The courthouse in America has always played an important role, serving both as a beacon- leading the traveler to the center of town and a symbol- steadfast sentinel of justice and order. Our design vision is that the new Howard County courthouse transcends its role as a justice facility, carrying it into the realm of public landmark in a new civic setting.

Commitment to Design Excellence

Courthouses in America play a role both functional and symbolic, they shelter justice. At the same time they serve as a visible symbol of the continuity and transparency of our justice system and our dedication to the constitution. The Project Site for the New Courthouse shall be developed so as to express the importance of the new building in a new civic space. The new civic space shall resemble the courthouse square so typical of the townscape of America. The courthouse shall be sited so as to give it visual prominence above all other buildings and structures on the site. These other buildings shall be subordinate in silhouette, placement, height and material to the courthouse.

Future Government Development on the Site

The Project is the first phase of a larger plan to develop the Project Site into a new civic space for the County. Project Site improvements anticipated to be made by the County subsequent to the Occupancy Readiness Date include expansion of the Parking Structure to approximately 1,200 spaces and the construction of two additional office buildings, each approximately 200,000 square feet in size, with associated parking. Such office buildings shall be subordinate in silhouette, placement, height and material to the New Courthouse and enhance and support the prominence of the New Courthouse.

Project Site Area Diagram

The property is a 28.98 acre parcel located at 9240 and 9250 Bendix Road. 9240 Bendix Road is a small building surrounded by a fenced yard. 9250 Bendix Road is the main building. The Developable Area of the Project Site is approximately 18.03 acres. To the west of the Developable Area is approximately 3.24 acres of floodplain and steep slopes. The Project Site as of the effective date is occupied by the 198,489+ SF single story warehouse facility (Dorsey Building) occupied by the County, various outbuildings, existing parking areas, and small green areas around the existing building.

Figure 2.1.1 Project Site Plan



Figure 2.1.2 Site Parcel

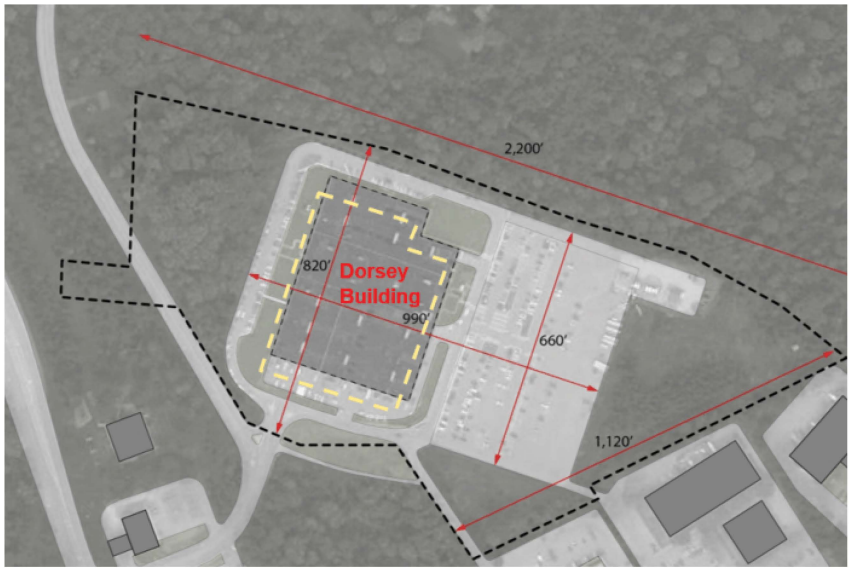


Figure 2.1.3 Birds Eye View



Figure 2.1.4 View from Bendix Road



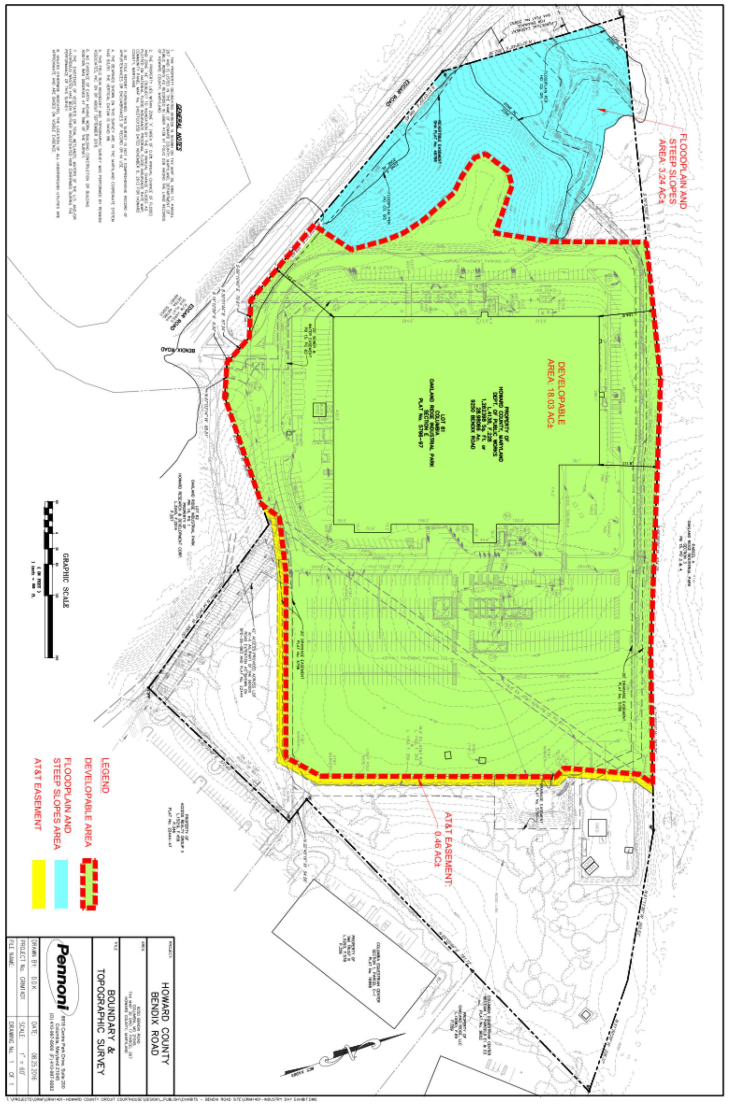


Figure 2.1.5 Developable Area

2.2 General Project Site Design Standards

At a minimum, the following standards shall be utilized for the development of this site:

- Howard County Zoning Regulations
- Howard County Subdivision Regulations
- The Final Development Plan for this site, FDP-36-A-III (FDP)
- Howard County Design Manuals, Vol. I-IV
- Maryland Stormwater Design Manual, Vol. I and II, Maryland Department of the Environment
- 2011 Standards and Specifications for Soil Erosion and Sediment Control, Maryland Department of the Environment
- 2017 Standards and Specifications for Construction and Materials, Maryland State Highway Administration
- Book of Standards for Highway and Incidental Structures, Maryland State Highway Administration
- Other pertinent State and Federal design guidelines, such as the Americans with Disabilities Act (ADA).

Development is subject to Howard County's Site Development Plan process. Howard County and referral agencies (Howard Soil Conservation District, Maryland State Highway Administration, etc.) must review the project site plans, utility plans, stormwater plans, sediment control plans and landscape plans. The design process must include all necessary submittals to Howard County including but not limited to the preparation of an Environmental Concept Plan, a Site Development Plan (SDP), public water and sewer contract drawings, and a record plat, as well as various studies required as part of the SDP process.

2.3 Specific Performance Standards

Building Height: Building height is outlined in the Final Development Plan. A maximum building height of 80' is permitted for this facility.

Setbacks: Are outlined in the Final Development Plan. Setbacks are 25' from rights-of-way, and 100' from any residential zoning district.

Building Coverage: Building Coverage is outlined in the Final Development Plan. There is no building coverage limit for this use, however, compliance with stormwater management requirements is required.

Stormwater Management: The Project Site must be treated as a re-development site due to the amount of impervious area present on the Project Site.

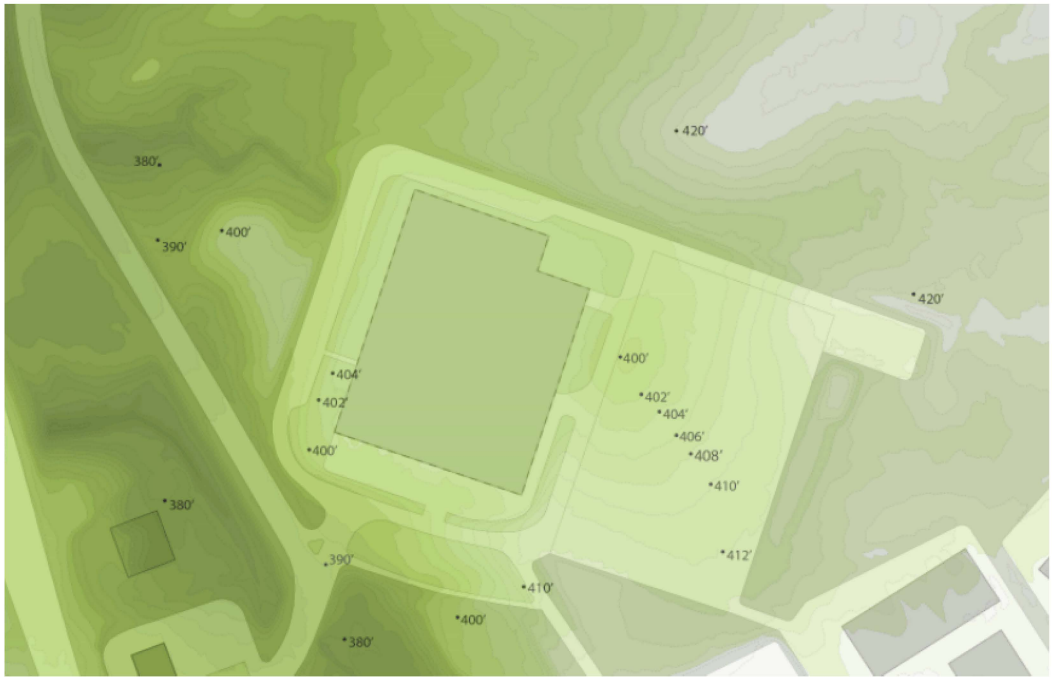
Forest Conservation: The Project Site shall be exempt from forest conservation requirements, due to exemptions in the Subdivision regulations which exempts properties that were part of a planned unit development which has a prior preliminary development plan approval.

LEED: The Project is required to obtain LEED Silver minimum rating. Which credits are achieved to accomplish this are up to the Project Company, however all prerequisites including those relating to the Project Site would be required.

2.4 Permissible Development Envelope

The development envelope is the Developable Area shown on the Boundary & Topographic Survey exhibit. The development envelope is bounded by a floodplain and wooded area on the west.

Figure 2.4.1 Topography Map



2.5 Parking Structure Requirements

The Parking Structure must provide at least 675 parking spaces for the courthouse in structured parking. The design of the Parking Structure shall facilitate the efficient expansion of up to 1,200 total spaces to support a potential future office building to be built by the County. The Parking Structure shall be controlled to allow the collection of parking fees. The paid parking collection system shall provide a convenient means for staff and juror free parking.

Projected parking supply of 675 parking spaces is based on the "Parking & Circulation Analysis; Howard County Circuit Courts" (January, 2015), prepared by Traffic Concepts, Inc. and estimated parking requirements for County and State employees that perform office functions. Note that Sheriff deputies drive County Sheriff vehicles to and from work and civilian employees that work in the Sheriff's Office do not drive County Sheriff vehicles to and from work.

This parking analysis included a survey of parking utilization over an eight-hour period for two days (Dec. 11, 2014, Jan. 22, 2015) to quantify a peak parking demand. The analysis assumed that these were an accurate measure of the courthouse "under normal operating conditions," and that the parking lot occupancy at 90% is considered full. The survey resulted in a peak parking demand ratio of 3.10 vehicles per 1,000 gross square feet (GSF) of courthouse area, which at 90% occupancy translates into a parking supply ratio of 3.44 parking spaces per 1,000 GSF.

The parking analysis cites the Institute of Transportation Engineers (ITE) Parking Generation 4th Edition as including data for a suburban judicial facility with a peak parking demand rate of 3.02 vehicles per 1,000 GSF, which is comparable to the 3.10 vehicles/1,000 GSF calculated in this parking analysis, validating the findings of the parking utilization survey.

In addition to the Parking Structure, 75 secure Sheriff parking spaces shall be provided. This parking shall include a secure connection to the courthouse. Sheriff secure parking shall be protected from pedestrian access. A fenced enclosure with vehicle and pedestrian card reader controlled access gate shall be provided. Parking may be divided with (25) spaces close to the Sheriff Entrance and (50) spaces can be located in secure parking within the Parking Structure or in a secure surface lot. Additionally, provide (20) enclosed (with roof and walls) secure parking spaces with direct access to Judge's elevators for Judges, Elected Officials, and Magistrates. Judge parking is secure from pedestrians with a card access controlled vehicle gate. The loading dock, Judge secure parking gate, and Vehicle Sallyport gates shall be fenced to prevent pedestrian (public) access to the secure entrances. The line of sight into the vehicle sally port and secure parking from the upper levels of the Parking Structure shall be avoided. Two charging stations shall be included in the Judge secure parking.

The Parking Structure shall facilitate parking spaces for 675 cars (or 725 cars if 50 of the 75 secure Sheriff parking spaces are designed and constructed in the Parking Structure). The design of the Parking Structure shall facilitate the efficient expansion of the garage to 1,200 parking spaces intended to support one 200,000 SF future office building. Parking for the second 200,000 SF future office building is not defined. The 20 enclosed secure Judge parking spaces and 75 secure Sheriff parking spaces are in addition to the Parking Structure requirements of 675 cars.

Summary of parking: 675 spaces in Parking Structure + 75 Sheriff vehicles (secure parking space for at least 25 Sheriff vehicles must be at the courthouse with access to the Sheriff's entrance) + 20 enclosed secure vehicle parking spaces at the courthouse with direct access to Judges elevators.

The actual number of spaces for the courthouse and courthouse related uses shall be determined by the Project Company by a parking needs study at the time of the Site Development Plan, per the Final Development Plan. This parking needs study shall detail the proposed uses and justify the parking required for the uses. A minimum of 675 spaces shall be provided for this Project.

Parking lot design shall be in accordance with Howard County Design Manuals.

The Project Company shall provide conduit pathway infrastructure for County-owned and privately-owned Electric Vehicle Supply Equipment (EVSE's). The infrastructure must be installed within County-owned parking lots/garages and/or facilities. These charging stations shall be located as close as possible to their electrical supply service while also assuring that the EVSE's are conveniently located for drivers. EVSE's shall not be located near hazardous areas. Charging cords associated with EVSE's shall not interfere with pedestrian traffic or present tripping hazards. Curbs, bollards, wheel stops, and/or equipment setbacks shall be used to prevent vehicles from damaging EVSE's. Accessibility issues shall be considered when locating EVSE's. Lighting about the charging station shall be provided for both safety and for reading equipment instructions. If the charging station is to be enclosed, provide adequate ventilation. Each EVSE shall be labeled to indicate the panelboard and circuit number. Four (4) charging stations shall be included in the Parking Structure and two (2) additional charging stations shall be included the Sheriff's secure parking.

Vehicular routes to the Parking Structure must be clear and intuitive when arriving to, leaving from and within the Parking Structure. It shall provide measures that create safe and secure pedestrian access to and within at all times of day or night.

2.6 On-site and Offsite Improvements

On-site Improvements include, but are not limited to:

Demolition - The Project Site includes the addresses 9240 and 9250 Bendix Road. Demolition Work is inclusive of both addresses. Demolition Work includes existing buildings, parking lots, and associated utilities. Demolition Work includes the abatement of Hazardous Materials contained in the County Environmental Assessment. The Project Company shall perform the Demolition Work for the entire existing project site. Demolition Work includes the demolition and proper disposal of debris for the existing facilities, including all existing paving and all existing site improvements. The County anticipates that it will remove approximately 90% of existing furniture and equipment from the existing facility. Project Company is responsible for disposal of all remaining furniture and equipment. The Project Company must determine the sequence and timing of demolition, and return all undeveloped areas of the Project Site to a stabilized condition, which at a minimum shall include an established stand of grass and minimal plantings.

Grading – All site grading and sediment control to be designed and completed in accordance with MDE and Howard County guidelines and specifications. Maximum slopes shall not exceed 3:1. Minimum slope on grass/vegetated areas shall be no less than 2.5%, except that defined swales shall be no less than 2%. Minimum asphalt pavement slope shall be no less than 1.5%, and no more than 5% for parking areas, and 8% for driveways that do not have parking immediately adjacent. Minimum slope on concrete pavement shall be 1%.

Paving – All surface parking areas shall be designed and constructed as asphalt pavement or permeable concrete pavers in accordance with Howard County and MD State Highway Administration guidelines and specifications. Accent paving shall be provided at the front of the courthouse building. Accent paving shall consist of stamped, colored concrete or vehicular rated pavers. Stamped asphalt shall not be used for accent paving. Concrete color shall be integral to the concrete, not applied after installation of concrete. Permeable concrete shall not be permitted. Project Company shall maintain access to adjacent properties to the east at all times throughout the construction project.

Sidewalks – All sidewalks shall be designed and constructed as concrete in accordance with Howard County and MD State Highway Administration, and American Disabilities Act (ADA) guidelines and specifications. Minimum sidewalk width shall be 5'. Sidewalks in the front of the courthouse shall be constructed with accent paving, either as stamped, colored concrete, or concrete pavers. Pedestrians shall be provided direct access into the site from Bendix Road by connecting the existing sidewalk on Bendix Road to the internal sidewalks of the site. Also, a direct and convenient connection must be provided to the existing shared-use pathway that meets Bendix Road just south of the site.

Vehicular Security Barriers – All vehicular security barriers used in areas where vehicles associated with the function of the courthouse that require access to the Project Site shall be rated to stop a 15,000 lb. vehicle traveling at the maximum attainable speed based on distance and the design of the vehicular route approaching the security barriers. All fencing used in conjunction with security barriers shall be rated to the same protection level as the vehicular security barrier. Vehicular security gates shall not be manned by the Sheriff's department and must be controlled by the Security Control Room.

Lighting – Site lighting shall be provided to adequately light the Project Site. Lighting shall consist of pedestrian level pole lights, bollard lights, building up lighting, and parking lot lights. Light fixtures and poles shall be in keeping with the building architectural design; standard roadway lighting is not acceptable for this project. Site lighting fixtures shall be LED.

Stormwater Management – Stormwater management design and construction shall be in accordance with MDE and Howard County guidelines and specifications.

Water Mains – Water mains and associated infrastructure shall in accordance with the Howard County Design Manual.

Sewer Mains - Sewer mains and associated infrastructure shall in accordance with the Howard County Design Manual.

Storm Drains – Storm drains and associated infrastructure shall in accordance with the Howard County Design Manual.

Gas, Electric and Communications connections/extensions – Design for these shall be in accordance with the local utility guidelines.

Retaining Walls – Any required retaining walls shall be segmental block or cast in place concrete walls with stone or brick veneer. Material selected shall be in keeping with building architecture for all highly visible walls. Fencing on the top of the walls shall be in accordance with the fencing description below.

Fencing – Shall be a high quality ornamental metal fence, and shall comply with building security requirements. Chain-link fence is not acceptable for this project. Fence design shall be in accordance with building architecture.

Site Furnishings – All site furnishings shall be in keeping with building architecture, and shall be low maintenance and high quality. Generally site furnishings shall be of metal construction; wood, plastic, or composite materials is not acceptable for this project. Site furnishings include, but are not limited to: flagpoles, benches, bollards, bike racks, tables, chairs, handrails, fountains.

Dumpster Enclosures – Shall be masonry construction with brick or stone veneer. Steel gates shall be provided for enclosure.

Public Transportation Infrastructure – The New Courthouse shall sit on a new route, #403. It is expected to be served in one direction, as part of a one-way loop, hourly during the days, and every two hours in the evenings and on Sunday. This is expected to result in about 15 trips/day on weekdays and Saturdays, and probably 6 on Sunday. Project Company shall coordinate with the Howard County Office of Transportation regarding the location and design of bus stops and related facilities.

Pedestrian Movement and Accessibility - The public realm must clearly, effectively and safely link all key pedestrian connections from the courthouse to parking spaces,cafe and bus stop. Minimize vehicular traffic and pedestrian conflict throughout the Project Site.

Vehicular Movement and Access/Egress- The design must functionally separate public vehicles from service vehicles, judiciary access, sheriff vehicles and secured detainees vehicles. Services and detainee transportation vehicles shall not obstruct judicial vehicles from entering the facility at any time. Security measures for vehicular entry shall involve intercoms, access-card readers, sheriff's radio communication, vehicle barriers, overhead doors, and security camera. Access requirements for staff, judiciary, accused transportation and service have different requirements and may be operated independently. Vehicular routes must be planned so as to prevent unauthorized vehicles traveling or parking near or around the secured area.

Secured Sally Port- Queuing space for at least one additional detainee van and two patrol cars must be provided outside the sally port.

Offsite Improvements include:

Re-striping the East Bound MD 108 through lane to a shared through/right lane at the intersection of Columbia Road and MD Route 108. All re-striping to be in accordance with MD State Highway Administration specifications and standards. See traffic study in Attachment 4A to this Appendix for details on this work.

Installation of signage, striping, and curbing to eliminate right turns from the Project Site onto Edgar Road and left turns from Edgar Road onto the Project Site.

Installation of landscaping and hardscape amenities at the Project Site entrance to enhance the arrival to the New Courthouse. Amenities shall include at a minimum monument signage, fencing, walls, pavers, and walkways.

The line of sight into the vehicle sally port and secure parking from the upper levels of the Parking Structure shall be avoided.

The courthouse shall have an 82' vehicle standoff distance, except for secure parking. All vehicular security barriers used to maintain the vehicle standoff distance, including areas where vehicles associated with the function of the courthouse require access to the Project Site, shall be rated to stop a 15,000 lbs. a vehicle traveling at the maximum attainable speed based on distance and the design of the vehicular route approaching the security barriers. All fencing used in conjunction with security barriers shall be rated to the same protection level as the vehicular security barrier.

2.7 Landscape Design Requirements

Landscaping requirements must be per the Howard County Landscape Manual available at:

https://www.howardcountymd.gov/Departments/Planning-and-Zoning/Land-Development/Regulations-and-Manuals#landscapemanual

To the extent practicable, native landscape material shall be utilized.

Federal Unified Facilities Criteria for anti-terrorism and building security shall be considered when designing landscaping.

3. SUSTAINABLE DESIGN CRITERIA

3. Sustainable Design Criteria

Howard County believes in sustainable design and construction and therefore they mandate that this project must obtain as a minimum, a LEED rating of Silver Certification. This shall be based on U.S. Green Building Council (USGBC) LEED Version 4 for Building Design and Construction. Silver rating certification requires obtaining a minimum of 50 points and the required prerequisites.

In general, which credits the Project Company wants to earn are left up to the Project Company with the following understanding and conditions:

- All prerequisites must be met.
- All registration fees, USGBC review fees and other fees shall be paid by the Project Company.
- If credits are selected that would require the County to buy or pay for something, the Project Company shall pay those costs.
- The Project Company shall obtain the following IEQ credits related to indoor air quality: Enhanced indoor air quality strategies, Low emitting materials, and Indoor air quality assessment.
- All LEED documentation in LEED Online shall be completed by the Project Company. The County shall sign any LEED documentation that requires their signatures or initials.
- The Project Company is responsible for all fundamental and enhanced commissioning services.
- A 16" diameter wall-mounted plaque and it's mounting hardware shall be provided and installed by the Project Company, along with a congratulations letter to the owner, 5 paper certificates, and a compressed file of all credit documentation at the completion of the Project (within 30 days of receiving LEED Certification).

4. GENERAL DESIGN CRITERIA

4.1 Architectural Design Criteria

The Circuit Court is part of the Judicial Branch of government and is a court of general jurisdiction. The new Howard County Circuit Courthouse shall express the values and traditions of a justice system that is effective, equitable, and accessible to its constituency. The design of the New Courthouse shall foster open access to justice. The building shall be designed using the best practices available, and shall be dignified, durable, and uplifting in spirit. Its form, materials, and treatments shall be distinctive in the landscape and emblematic of a courthouse.

The design of the New Courthouse shall be transitional in nature, embodying elements of both contemporary and traditional architecture. Contemporary technologies, construction techniques, and materials shall be utilized to the benefit of the building and its spaces. However, traditional principles of scale, proportion, massing, articulation, and craft shall guide the design along with contextual references to classical form.

The key attributes of the building design that shall allow it to be recognizable as a courthouse are:

Civic Prominence – The profile of the building shall be iconic and visible from a distance. Procession to the building by vehicle or foot shall emphasize its significance. The creation of an adjacent civic green shall support the Courthouse, serving as a foreground for public ceremonies, memorials, and informal gathering. It is not anticipated that the green shall serve commercial or public programs such as farmers' markets, festivals, or concerts.

Classic Scale – Public spaces such as the courtroom floors and lobby shall be scaled to convey the civic nature of the building, providing ample height, open space, and access to daylight. Proportion and massing of design elements shall reinforce entry into the building and circulation through public spaces.

Public Entry and Experience – Citizens shall be welcomed into the building through a distinguished public-facing entrance. Wayfinding signage and access to services must be clear, intuitive, and convenient. Security screening must be robust but unobtrusive, with adequate queuing space and capacity for peak loads. Rich use of materials and treatments inside the New Courthouse shall emphasize the dignity and importance of the Court. All interior spaces, including the courtrooms, shall have well-tempered access to daylight.

The New Courthouse shall be a significant landmark. Its architectural form shall balance expression of the authority and power of the law with a concern for the needs of the people who enter seeking justice. Its articulation shall balance tradition with a progressive spirit to uplift and inspire all those who enter.

The following are architectural design approaches for the building:

- The public entrance must be clearly visible and recognizable on the exterior of the building.

- Balance transparency of the building with security requirements. Provide a ballistic glazing assembly (minimum level 2) to a minimum 8'-0" at the lobby exterior walls.
- Design the public lobby as a primary focal point for the facility, with a double height space in this area.
- The lobby must include a queuing area prior to the security screening stations that is large enough to accommodate a typical peak number of people anticipated to be in the line for screening. This area must be entirely within the enclosure of the building with clear sightlines from lobby security posts. If the security screening area is fully enclosed and fully separated from the lobby, only the screening area is required to have a ventilation system isolated from the rest of the building. If the top of the wall separating the screening and lobby is below the finished ceiling, the lobby and security screening are both included in the requirement for the lobby to have a ventilation system isolated from the rest of the building.
- The security stations in the public lobby must have unobstructed views to the public entrance doors and the approach to the entrance from the exterior of the building.
- Public spaces shall be designed as an integrated sequence of spaces that leads from the parking and drop off areas, to the main public entry, then to the various public destinations within, finally arriving at the courtrooms.
- The New Courthouse shall have an 82’ vehicle standoff distance, except for secure parking. All vehicular security barriers used to maintain the vehicle standoff distance, including areas where vehicles associated with the function of the New Courthouse require access to the site, shall be rated to stop a 15,000 lbs. vehicle traveling at the maximum attainable speed based on distance and the design of the vehicular route approaching the security barriers. All fencing used in conjunction with security barriers shall be rated to the same protection level as the vehicular security barrier.
- There must be an easily identifiable, intuitive system of wayfinding, using architectural cues and signage to indicate the sequence of movement to aid the Public's procession through the building to their destinations.
- Public circulation systems and public waiting areas shall have access to natural light and scenic views.
- Express the interior organization of program elements in exterior building massing elements, material choices, detail, fenestration and form. For example, public corridors along exterior walls may have larger scale curtain wall systems, while private offices have smaller, punched window types (or other as consistent with the overall design intent).
- Ancillary structures of one story, not critical to the structural support of the main courthouse building, may be located within the 82' vehicle standoff distance.

4.2 General Architectural Design Criteria

Courthouse Design Principles

Courthouses provide facilities for the impartial, accessible and timely delivery of due process and other justice services. New facilities must be flexible and efficient to ensure that these buildings reflect the wise use of taxpayers' funds.

The design of the courthouse buildings shall balance short term construction cost and long term operations costs to ensure useful life and capacity for changes in use. This shall be achieved through the following fundamental principles:

A Successful Vision for the Community

The courthouse in America has always played an important role, serving both as beacon - leading the traveler to the center of town, and - symbol- steadfast sentinel of justice and order. The design vision is that the New Courthouse transcends its role as a justice facility, carrying it into the realm of public landmark in a new civic setting.

Commitment to Design Excellence

Courthouses in America play a role both functional and symbolic. They shelter justice, at the same time they serve as a visible symbol of the continuity and transparency of our justice system and our dedication to the Constitution. The Project Site shall be developed so as to express the importance of the new building in a new civic green. The courthouse shall be sited so as to give it visual prominence above all other buildings and structures on the Project Site. These other buildings shall be subordinate in silhouette, placement, height and material to the courthouse.

Future Government Development on the Site

The Project is the first phase of a larger plan to develop the Project Site into a new civic space for the County. Project Site improvements anticipated to be made by the County subsequent to the Occupancy Readiness Date include expansion of the Parking Structure to approximately 1,100 spaces and the construction of two additional office buildings, each approximately 200,000 square feet in size, with associated parking. Such office buildings shall be subordinate in silhouette, placement, height and material to the New Courthouse and enhance and support the prominence of the New Courthouse.

Justice Center Concept

- The design of the Project Site and New Courthouse facilitates the management of multiple activities, needs of each department and the public at large.
- Opportunities for sharing resources and support spaces shall be implemented where appropriate.

- Departments and agencies that support the work of the court, such as Court Service Centers, Law Libraries, District Attorney, Legal Aid, Social Services, not for profit community partners, space for victims, and witnesses may be housed within the courthouse while respecting the need for the judiciary to be viewed as a separate, independent branch of government.

Program

- Program requirements must offer flexibility to accommodate future changes in service delivery.
- The courthouse shall be designed for internal flexibility of space assignments including office space, support space, and courtroom use.
- Spaces shall be organized to optimize future options for change in space use, while maintaining separate circulation and security zones.
- Space needs shall be based on courtroom utilization and judicial scheduling data to promote efficient operations.
- The Project Company shall provide a strategy to expand the New Courthouse if additional courtrooms are required in the future.

Building Organization

- Courtrooms shall be grouped to share public waiting areas and use of courtroom support elements. An odd number of courtrooms on a floor shall be avoided, where possible. If the space program calls for an odd number, the area that would have been occupied by a paired courtroom shall be designed to accommodate the future build-out of a courtroom. The structural bay dimensions and height of the mirror courtroom shall be provided, even if a courtroom is not built there during initial construction.
- The organization of departments and building circulation must be convenient, clear, and compact, supporting the flow of the public, staff, and detainees.
- Heavily trafficked, high volume transaction offices and other heavily used support services shall be located on the first or second floor close to the entry lobby.
- Public, court staff and detainees shall have separate circulation systems that meet only in the courtrooms.
- Departmental adjacencies shall be arranged to facilitate workflow, public access, and operational efficiency.
- Judges, Department heads, and Sheriff shall have discrete, separate parking with direct private access to the staff circulation system. Judges must be able to move from parking to chambers and to courtrooms without contact with the public or the accused.
- Judge chambers shall be located in suites to allow convenient access to all courtrooms for shared use, and to allow for shared access to staff resources.

- The accused shall travel to and from the courthouse in Sheriff vehicles, and transferred in a vehicular sally port out of view of the public.
- Ease of wayfinding for public and staff must be provided.

Flexibility and Growth

Court facility space needs change over time. Examples of programmed flexibility include standard courtroom sizes with capacity for juries or special case types, and standard structural modules with adequate dimension and capacity to be converted to courtroom space.

Floor-to-floor heights, location of vertical and horizontal circulation elements and column bay dimensions shall allow for conversion of office space into courtrooms where possible within cost constraints. Building infrastructure and raceway shall allow for future expansion consistent with the project program and funding.

The future courthouse expansion shall anticipate one complete Court Set (2 standard courtrooms, 2 courtroom vestibules, waiting area, 2 courtroom storage, 1 AV closet, 2 attorney/client conference rooms, 2 large attorney/client conference rooms, 2 jury deliberation room suites, 2 robing rooms, 3 holding cells & holding vestibule), one Judge Chamber suite (2 Judges) and space for additional staff at the Clerk of the Courts, court reporters, Jury Assembly, and Bailiffs.

Applicable Building Codes (include, but not limited to)

- 2018 International Building Code (IBC)
- 2018 National Fire Protection Association 101 Life Safety Code (NFPA)
- 2018 International Mechanical Code (IMC)
- 2018 International Plumbing Code (IPC)
- 2014 National Electric Code (NEC)
- 2012 Maryland Accessibility Code (MAC)
- 2010 American Disabilities Act Standards for Accessible Design (ADA)
- Howard County Building Code (HCBC)

Courtroom Design Principles

The courtroom shall be designed so to communicate hierarchy and significance, using materials and the organization and detailing of the functional elements to express the importance of the matters that take place in the courtroom. Finishes and treatments in the courtroom shall reflect seriousness and promote decorum during court proceedings.

Dignity

Courtrooms are the culmination of the movement sequence through the courthouse. The design shall be consistent with the concept of the building, using noble materials that express the authority and dignity of the Law, and the importance of the matters to be decided there. The design of the courtroom shall create an ordered and serene environment that is also comfortable, durable, and flexible. The formal arrangement of the primary elements of the courtroom: the judge's bench, witness box, jury box, counsel tables, and spectator seating area express attitudes about the authority of the judge as the finder of law, the power of the jury as finder of fact, and the rights of the accused to due process. In a civil proceedings, the disputing parties shall be perceived as equivalent.

Materials

The ambiance of the courtroom shall be sober, elegant, and authoritative, appropriate to the important matters of freedom and fortune to be decided there. Finishes shall be well detailed and constructed by expert craftsmen. The palate of materials shall be muted without high contrast in color and pattern. Ceiling heights shall be in proportion to the size and width of the space, generally in the proportion of 2:5.

Lighting, Daylight and Views

The lighting environment is critical as all persons must be able to see the proceedings. There are three types of lighting in the courtroom, general illumination that allows comfortable reading, ambient lighting that reduces contrast and makes the room feel bright and pleasant, and special lighting to illuminate features or to serve an ornamental purpose. The presence of natural light and views of nature are important to relieve the stress of court proceedings and are an important part of courtroom design. Care shall be taken to control glare and potential heat gain.

Acoustics

The clarity and quality of the acoustic environment is important to allow persons in the courtroom to hear the proceedings: every word expressed by a participant shall be audible, to permit accurate recording of the proceedings. The reverberation within the courtroom must be controlled in order to combine natural speech, amplification through the audio system, and recording for the court record. The courtroom shall be isolated from sounds from adjacent spaces, and from noise from mechanical and plumbing systems. A white noise masking system must be provided at the jury box area and all spaces outside of the jury deliberation room.

Sightlines

Sightlines are critical for security, Public entrance, public lobby, corridor, and all areas where public has access shall have clear sightlines for officers.

Sightlines are also critical to the functionality of courtrooms. All participants in the well of the courtroom: judge, jury, counsel, witness, and court reporter must have unobstructed sightlines to each other. The views from the jurors to the witnesses help to reinforce statements made by a witness through their facial expression and body language.

The introduction of computer monitors at the various locations throughout the courtroom can be a significant impediment to clear sightlines. Where possible, and particularly at the judge's bench, the monitors shall be sent into small recessed troughs to reduce their height and the degree of blockage.

Health, Safety and Welfare

- The needs for security with openness, transparency and natural light shall be balanced. Natural light shall be provided to all primary public waiting areas, main lobby and work areas. Interior spaces shall allow glare-free, natural light at all work areas.
- Administrative work spaces shall be designed with productivity, effectiveness, and well-being in mind.
- The building organization and design shall balance the essential requirement for security of all personnel, detainees, visitors, and court operations with the important value of a justice system serving all constituents.
- Courtrooms and meeting rooms could be used by any court department, at the discretion of the Presiding Judge and Court Administrator.
- The building design shall allow access to natural light and scenic views for all courtrooms and regularly occupied spaces.
- The New Courthouse shall be designed so that it is easily physically and electronically monitored by security staff. Clear sightlines are important in all public spaces, with view to all parts of the public zone.
- Design- based decisions shall be coordinated with technology and staff capacity to ensure that all contribute to a secure environment in a potentially volatile atmosphere.
- The New Courthouse shall be designed for universal access. This means that all public areas must be fully accessible. Staff spaces must be readily adaptable, where full accessibility is not a practical matter.
- The use of adjustable, sit/stand desks for staff areas, transaction counters, and courtrooms shall be employed.

Technology

- Flexible, robust infrastructure shall be provided to meet today's technological needs and anticipation of future changes.
- Remote conferencing, case filing, record storage, arraignment, and electrical capacity throughout the courthouse shall be configured to facilitate current and future workflow.
- Paper file space shall be configured for future adaptation to other uses as a result of change over to electronic filing, file storage, and case management.

- Provisions for electronic assistance to the public for access to information and case files shall be facilitated by the design. Electronic displays of building information, building displays, courtroom calendars both in the entry lobby and at the courtroom entrances, and queuing systems at the Clerk counters are all part of the technology assisted public experience. Locations for charging stations for the public shall be convenient and prominent in all waiting areas.

- Public Wi-Fi and DAS repeaters shall allow continuous Internet access throughout the building.

Civic Presence

The New Courthouse shall communicate the prestige and the importance of the court as a place where citizens participate in the justice system. The New Courthouse building and grounds shall convey a public spirit of stability, fairness, dignity, accessibility and permanence. Courthouses are landmarks in their communities with a civic responsibility to reinforce their physical context as they define the public space and give it an identity. The performance requirements include the following:

- There shall be convenient pedestrian access through the site to the courthouse entrance. Service and secure entrances shall be located to minimize their visual significance.

- The building design shall respond to its physical context, reinforcing its strengths, and mitigating weaknesses where they exist. The building expression shall not mimic historic architectural styles, but communicate an authentic contemporary spirit that shall speak well of our time to future generations. The design shall be elegant, economical, and welcoming to all who come there seeking justice.

- The Project Site shall be organized so that its perimeter enlivens the adjacent edges and strengthens the connections to the various uses in the neighborhood.

- The exterior expression of the building facade shall reinforce the functions housed within, in order to contribute to wayfinding and orientation, and to communicate openness.

- Monumental, significant public spaces shall be expressed in massing, patterns of windows and other facade treatments.

- Spaces shall be arranged so as to convey the impression of order and decorum.

- Durable materials shall be used that convey a sense of permanence and strength, providing ease of maintenance over the long life of the building.

- The building shall be designed so that the community perceives it as a physical and social asset.

- The open spaces around the New Courthouse shall be configured so that they can be enjoyed by the public for a variety of civic uses.

- The building shall be designed to communicate the civic Importance of the Court as well as be welcoming and open to the public who come there seeking justice. Its design shall support the public's needs including clear wayfinding, ample waiting space, and intuitive building organization.
- The Project shall provide universal access barrier-free design without ramps, lifts, or special entrances for the disabled.
- The Project Site design shall follow Crime Prevention Through Environmental Design (CPTED) principles for crime reduction, and provide unobtrusive landscape integrated barriers to 82' vehicle intrusion within 25 feet of the Courthouse building edge.

The design, engineering, and construction of building elements, assemblies, and systems necessary for a complete and fully functional court facility shall include but not be limited to:

- Wind and seismic analysis and design.
- The coordination of the site plan with the building design, including all utility connections and on and off site improvements.
- American Disabilities Act compliance.
- Exterior envelope assemblies, barrier walls and drainage plane systems.
- Expansion joints: where required, expansion joints shall be designed to be minimally visible and watertight. Joint cover assemblies shall meet all code requirements for impact, loading and fire protection.
- Coordination of all elements with the building's structural, electrical, plumbing, life safety, IT, and mechanical systems.
- Thermal, moisture, air infiltration, insulation and damp proofing systems including roofs, concrete slabs, basements, foundations, parapets, walls, doors, window systems and retaining walls.
- The provision and coordination of all drainage systems including roof, storm water, foundation drains, site drains, ramp and entry drains with the building design.
- The provision and coordination of all seismic anchorages and restraint and bracing systems of non-structural elements as required.
- All camera niches, access panels, bird roosting and nesting control.
- Two flag poles shall be provided to accommodate a State of Maryland flag and a United States flag, near the New Courthouse public entrance.
- Roof access and rooftop equipment shall be kept to a minimum and located in the rooftop penthouse or behind visual screens. The location, size and finish of rooftop penthouses and visual screens shall be integrated with an architectural finish.

- ~~Visual screening systems of roof top mounted equipment.~~
- Concealed flashing systems that cannot be easily replaces shall be permanent, stainless steel, copper or other metal flashing systems not subject to corrosion. Systems shall be consistent in material, detail, scale and quality with the facility design.
- Sealant, fire safing, fire protection and caulking systems.
- Barrier walls and drainage plane walls.
- Exterior cladding systems.
- Exterior building identification systems: the exterior signage on the building shall identify the courthouse and other required messages.
- Fenestration and fixed windows, curtain walls and entry door systems.
- Glare and heat gain at all work areas and public spaces shall be controlled. Glazing in public lobby shall be mitigated for temperature and glare control so security screeners and other staff can work/see monitors comfortably.
- Building entries from exposure to weather (rain and snow) shall be protected through exterior canopies, building recesses or overhangs at all exterior entrances to protect doorways.
- The compliance with fire codes, occupancy ratings and area separations, exiting requirements and American Disabilities Act.
- Any exterior stairs, ramps and walkways shall have guardrails and handrails of stainless steel, bronze or other permanent material that has a design and finish consistent with the facility design.
- Exterior window washing and building maintenance systems.
- Exterior facades and roof overhangs shall be designed to inhibit bird roosting and nesting. Roosting and nesting shall be provided on horizontal surfaces greater than 6" deep, especially in protected or covered areas.
- Interior elements including but not limited to: day lighting controls, entry door systems, walk off mats and floor grates, interior partitions, interior glazing and borrowed lights, open plan and closed office spaces, public areas, raised platforms, public transaction counters and lobbies, toilet rooms, break rooms, elevators, ceiling systems, plenum spaces, specialized interior construction, materials and finishes, window coverings, fixed and rolling high density file systems, wall finishes, ballistic shielding, acoustical partitions and other acoustic wall and ceiling covering assemblies, all tenant improvements, doors, frames, side lights and hardware, floor covering, access panels, fire extinguisher cabinets, building specialties and miscellaneous fixtures and equipment, soffits, architectural woodwork including: cabinets and casework, hardwood veneer paneling and running trim and wainscot, other materials and finishes, complete integrated building identification, interior signage lobby directories, room numbering and wayfinding systems, all backing, anchorage and coordination.

- The design, coordination and provision of all support spaces, backing and anchorage to allow for the seamless integration and installation of all mechanical, electrical, HVAC, plumbing, telecommunications, fire life safety, information technology, data, security, courtroom technology and FF&E systems including but not limited to:
    - Adequate, accessible spaces and areas for raceways, conduit, piping, ducts, devices and equipment.
    - Adequate backing, bracing, and anchorage systems.
    - Finished recesses, niches, areas and cavities for equipment including: security cameras, building directories, lighting, electronic signage, monitors, projectors, annunciator panels and other electronic systems.
    - Vertical shafts, duct chases, soffits, plenums and equipment access panels.
    - Required clearances, access, power, lighting, signaling, drainage and areas necessary for equipment installation and maintenance.

Public Art

The Project Company shall provide opportunities for the display of Public Art in the New Courthouse and on the Project Site in accordance with Section 7, (T) of this Project Agreement. Art will be provided by the County and coordinated during the Design Build Period.

4.3 Quality, Durability and Usefulness

The New Courthouse shall be designed to provide long-term value to the County by balancing initial construction costs with life cycle operational costs. To maximize value and limit ownership costs, the Design and Construction Standards require the utilization of building components and assemblies that comply with the optimal functional lifetimes of each. The New Courthouse shall have a useful life significantly longer than the Term of the Project Agreement in accordance with Appendix 8 of this Project Agreement.

4.4 Accessibility

Barrier-Free Accessibility

Universal design principles serving all users regardless of their physical and mental abilities, language, age, size, gender, ethnicity or economic circumstances shall be employed.

This shall be achieved through the following performance requirements:

- Public spaces, building entrances and building amenities to facilitate wayfinding and equitable access shall be located within the building without the need for separate, specialized features.
- A human-centered design that enables diverse users to comprehend and access the programs and service of the justice system, meet fundamental needs and understand the dignity and seriousness of court proceedings shall be provided.

All areas in the courthouse that are used by the public must be accessible to people with disabilities. Private staff work areas must be adaptable to accessibility.

Refer to Maryland Accessiblility Code 2012 and 2010 American Disabilities Act Standards (ADA) for Accessible Design (https://www.ada.gov/regs2010/2010ADAStandards/2010ADAstandards.htm) for required components of the accessible path and accessibility features, and "Justice for All: Designing Accessible Courthouses," (November 2006) from the U.S. Access Board Courthouse Access Advisory Committee (https://www.access-board.gov/attachments/article/432/report.pdf) for guidelines on design of accessible components unique to courthouses. In addition, public areas of the courthouse must comply with Maryland Accessibility Code Guideline for Buildings and Facilities (COMAR 05.02.02))http://dhcd.maryland.gov/Codes/Documents/AccessibilityCode/Maryland%20Accessibility%20Code%20-with%202010%20ADA%20Standards%2011-18-2011.pdf)

At a minimum, public users of the building with disabilities shall be able to approach and use the following spaces in the same way that non-disabled participants do:

- Front public entrance without having to take a circuitous route
- Public clerical and information counters
- Jury assembly spaces and amenities
- Jury deliberation rooms (provide knee space and clearance at sink)
- Restrooms both male and female on every level of the building requiring public access
- Accessible path of egress from all public spaces in the building
- Courtrooms and all public user stations within the courtroom
- Vending areas

- Signage required for wayfinding and information as required by code
- Inmate holding areas in quantities as required and described in program

Staff areas throughout the building shall be designed to be universally accessible or adaptable to universal accessibility. At a minimum, the following must be fully accessible by the Occupancy Readiness date:

- One courtroom per each type must be fully accessible to all staff and public user stations, including judge and clerk raised workstations.
- Staff restrooms at every level.
- Ramps required for change in elevation.
- Signage required by code.
- Staff kitchenettes (provide knee space and clearance at sink, easily convertible to access).
- Judges lavatories are not required to be accessible, but shall be adaptable, and blocking shall be provided in walls at all toilets designated for adaptability for installation of future grab bars.

4.5 Definition of Building Shell and Core

The shell and core components shall be defined as the following:

- Service Core elements include the following:
    - Building stairways for exiting.
    - Electrical, telephone, IT, janitorial and mechanical rooms (with fan unit) to the extent located on each floor.
    - All core partitions and elevator lobbies, clad with gypsum board taped and spackled as required by the building code.
    - Toilet rooms on each floor in compliance with building codes and finished in accordance with the room data sheet.
    - Access at the core to domestic water, drainage and vent systems.
    - Elevator lobbies and elevator pockets for the elevator lobby smoke doors as required by the building code.
- Core door elements such as building standard doors installed for stairwells, electrical, mechanical, janitor and telephone rooms and toilet rooms, finished and completed with frame, trim, hardware, locking devices where applicable and closers.
- Exterior walls such as curtain walls shall be installed and sealed, and all perimeter walls shall be sealed, weather-tight and insulated. Floors shall be smooth and level (in accordance with industry standard) with troweled finish.
- Public entrances require doors that are easy to operate in a variety of environmental conditions. Doors that are appropriate for courthouse public entries include balanced swing doors, power-assisted swinging doors or power-activated sliding doors.
- Aluminum, stainless steel or other approved metal, institutional-grade door system with matching frames for public entries shall be provided. Painted aluminum frames and door area not allowed for high-volume entrances.
- Heating, Ventilation and Air-Conditioning (HVAC)
    - Air handlers(s) shall connect to the building heating and cooling systems and be complete and fully installed to service the core area on all floors.
    - The main supply distribution cold air duct loop from the mechanical equipment room shall be located around the building core where practical.
- Lighting shall be LED and installed and operating in all of the stairwells, elevators, lobbies, mechanical rooms, utility rooms, janitorial rooms, toilet rooms, and all other core areas.

- Electrical/Power
    - Electrical closets shall be located on each floor with electrical panels dedicated per floor and dedicated to each system (i.e. Receptacles, Lighting, HVAC, etc.). Panels shall be sized per the connected loads, with a minimum of 200A and 25% spare capacity.
    - Separately metered electrical service, sized per the connected loads, with 25% space capacity per the building code, stubbed to the premises, shall be provided.
- Life Safety
    - The Project Company shall install life safety systems to the extent required by the building code for shell and core construction. All required panels, relays, etc. shall be in place and ready for hook-up.
    - Provide and install a fire suppression sprinkler system connected to the building fire protection system, in accordance with all applicable and life safety codes.
    - Fire hose and fire extinguisher cabinets shall be installed at egress stairs or as required by the building code for shell and core construction.
    - Exit signs shall be located at all stairwells and as required by building code.
    - Smoke detectors in all elevator lobbies shall be located on all floors.
    - Fire extinguishers shall be provided as required by National Fire Protection Association (NFPA).
    - Fire horns, exit signs and communication systems shall be installed as required by the building code for shell and core construction.
    - Electric hold-opens shall be installed for all smoke doors at the elevator lobbies.
    - Sleeves through the floor in core telephone rooms for telecom access shall be provided for communication systems.

4.6 Building Circulation System Requirements

Courthouse design is organized by three (3) separate zones of circulation, which is intended to provide safety to all occupants, efficiency for staff, and ease of wayfinding for public visitors. Each circulation system remains separate throughout the courthouse and only comes together in the courtroom itself, see Figure 4.6.1 and 4.6.2. In order to pass between circulation zones, there shall be control points with some means of mechanical, visual and/or electronic security monitoring. The three zones of circulation are as follows:

- Public Circulation (general public visitors)
- Staff Circulation (restricted circulation zone that refers to all courthouse staff, including Judges)
- Detention (secure circulation zone that refers to all detainees under Court Security Officer's and Sheriff Deputies' supervision and escort)

Public

Most of the public are not familiar with courthouse navigation. The main lobby and corridor system shall be clear, simple, and linked in providing ease of orientation and wayfinding. The use of natural light in corridors represents the civic transparency of the courts, aids in orientation, and improves the overall experience for visitors and staff alike.

The public lobby and public corridors shall provide a direct connection for access to courtrooms, transaction offices, main jury pool room, judicial reception, hearing rooms, district attorney office, and public restrooms. Public elevators, escalators and interconnecting open stairs shall be located adjacent to each other to create a single decision point for navigation. Repetitive elements such as courtrooms, public restrooms, and emergency egress stairs shall be in the same location and pattern on all floors.

After being processed through the queuing space and security screening of the main public lobby, visitors shall have access to an information desk, information kiosk and monitors to assist in wayfinding. The exterior canopy helps to signify the courthouse entrance and provides relief from the weather.

In order to reduce reliance on elevators, and encourage healthy activity, high traffic departments shall be on lower floors, and accessible via open monumental stairs from the main level. This shall reduce wait time for elevators, reduce the size and quantity of elevators, and reduce frequency of elevator maintenance.

Staff

The staff circulation zone is a restricted area that encompasses dedicated corridors, elevators and stairways allowing for movement between departments and courtrooms in a private and safe manner for court staff. The circulation pattern shall be clear to support staff efficiency. Staff using this zone of the courthouse includes Judges and their staff, Magistrates and their staff, clerks, court administrators and court reporters, and security personnel.

Non-court personnel, such as State's Attorney staff, clinicians and social service providers have “private circulation areas," within their departments that have card access to staff vertical circulation areas, but shall not have access to dedicated court staff corridors, and are not permitted in court staff areas without permission and an escort. Jurors also use staff circulation, but under escort or card access as dictated by the court.

Court staff need an “Employees Only” area to work, meet, and to take breaks without the potential disturbance or risk of uncontrolled encounters with hostile members of the public. Court staff circulation areas shall have access to natural light and provide a measure of security and privacy. On courtroom floors, staff circulation shall allow Judges, clerks and court staff to reach the courtroom and jury deliberation rooms without crossing public circulation. Judges shall not overlap circulation with jurors circulating between jury deliberation rooms and courtrooms.

Judges and Department Heads enter the courthouse through the dedicated staff entry with direct access to judges parking. The staff entry shall be physically and visually separated from the main public entrance and the detainee entrance. The judges parking area shall have a direct secure access path to the staff entry. The remainder of the staff and non-court staff shall enter the facility from the public lobby and go through screening.

In addition to court staff, facilities staff shall circulate in some of these “back-of-house” spaces. The loading dock and service entry typically have access to the staff circulation corridors and spaces. Therefore an important staff circulation consideration is providing ample space for the cleaning staff carts, turning radii and width requirements for bulk deliveries and maneuvering clearances for maintenance ladders and lifts.

The loading dock is used for trash and recycling removal. The loading dock and its corresponding vehicular circulation path shall consider vehicle turning radius and overhead clearance requirements for trash/recycling removal. The loading dock and site drive circulation shall be designed to accommodate a WB-67 Interstate semitrailer. All loading dock activities shall be acoustically separated from court spaces and operations.

Detention

The detention zone and pathway is a dedicated, secure circulation zone for detainee movement between the central holding area and courtroom holding areas. Use of secure circulation is controlled and monitored by the Court Security Officers. Movement is limited to authorized personnel and escorted detainees only. Security is paramount in a courthouse and the detention zone has the highest degree of security to control detainee movement, minimize risk of escape and minimize risk of transfer of contraband and other potentially unlawful activities.

Detention areas between courtrooms shall be aligned vertically with the central holding area. Dedicated secure “detainee-only” elevators shall move detainees vertically between these spaces. One secure detention stair is to be located adjacent to one of the secure detention elevators. Use of electronic detention-grade hardware on doors, surveillance cameras (CCTV), and personal communication devices are required to reinforce the importance and presence of security.

Detainees enter/exit the Courthouse through a sequence of dedicated secure vehicular and pedestrian sally ports which are connected directly to the central holding area. The secure vehicular sally port shall be located with sight and sound separation from the main public entry, judges and staff entry, service entry, jury deliberation rooms, and main jury pool room. Sight and sound separation between adults and juveniles is also required. A sally port, whether vehicular or pedestrian, is a minimum of two (2) interlocked doors which must be located at the secure perimeter of any detention area. The sally ports are the only means of movement in or out of the detention circulation zone.

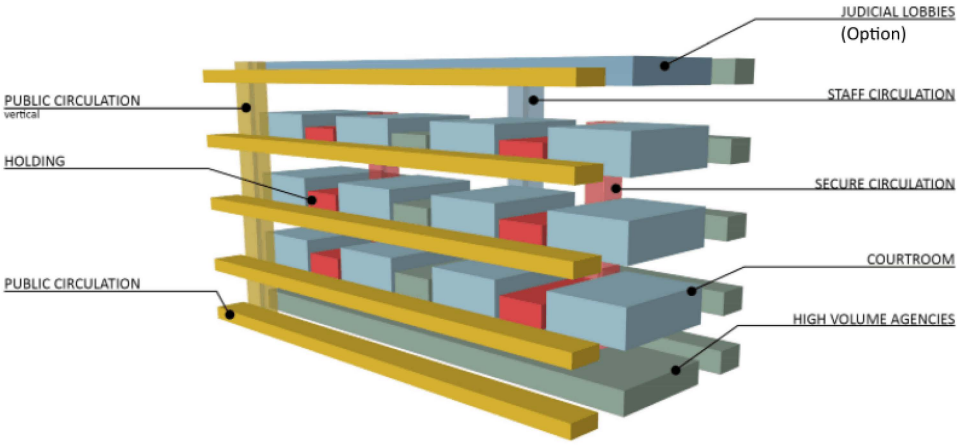
Access between Restricted and Public Zones

All access points between restricted circulation and public circulation are frequently required for several reasons: for egress to provide access to exits in emergencies; for ingress to permit staff to enter into the public zone to meet with public; jurors to enter into the restricted deliberation areas and the courtrooms; and for security and facility maintenance staff to reach all areas of the building. At all access points, the doors must be controlled by electro mechanical or magnetic door hardware, and have alarms and card reader overrides to permit access by authorized individuals without setting off security alarms. Design shall not rely on free egress into staff areas from public side for life safety, but if a situation arises, delayed egress shall be provided with alarm.

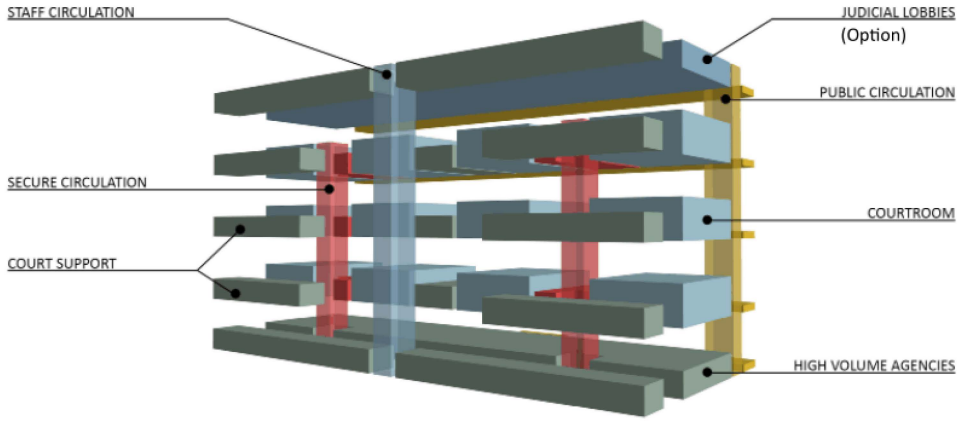
Re-entry access from public and staff exit stairs, if required by code, shall be alarmed and card access, with delayed egress if permitted based on the configuration of exists and path of travel.

Public areas of the building shall have at a minimum two means of egress provided by public stairwells that discharge to the public right of way without crossing restricted or secure circulation. Staff/restricted and secure areas shall have at minimum one means of egress that discharges to a public right of way without crossing public circulation within the building.

Figures 4.6.1 Horizontal Circulation



Figures 4.6.2 Vertical Circulation



4.7 Building and Volumetric Efficiency

The New Courthouse shall be designed to maximize space use efficiency and provide sufficient building support area and circulation space to afford safety to the building users and meet the functional requirements of a high volume, full service courthouse. General building efficiency goals shall include:

- The building gross efficiency factor shall be within the acceptable ranges described in the Maryland Department of General Services Facility Program Manual, between 54% (1.85) and 59% (1.70) efficient. The Project Company is encouraged to seek higher efficiency percentages in the design solution. The building gross factor is determined by dividing the gross building area by the sum of the net square footage.

4.8 Stair System Requirements

The following stairwell systems shall be provided:

Code Required Fire and Emergency Stairwells

- Doors shall only open to public areas.
- Exit stairs on restricted circulation can be used by public in an emergency with delayed or alarmed egress, as allowed by code.
- Exit stairs shall be designed and finished as staff circulation areas.
- Exit doors shall be visible from main public corridors.
- Basement stairwells shall be separated from the fire stairwells to other floors of the building as required by building code, and to exit only to exterior of building.
- Stairwells shall not allow for individuals to hide in the landing.
- All first floor exterior fire exit doors shall be equipped with door position indicator switches which shall activate indicator lights in Building Security Control when opened. These systems shall be designed to prevent absconders from running from the building and to indicate when a fire exit door is left ajar.

Public Connecting Stairs

- Public visitors' use of open, ceremonial stairs between the connected floors ~~is preferred and~~ shall be used to help reduce elevator load.
- Provide convenient stairs where appropriate, located strategically to reduce elevator use by staff and visitors.
- Public connecting stairs shall be ceremonial in design and shall include architectural details in supports, tread, riser and railing design. Painted structural steel stringers with precast terrazzo treads and structural glass railings and stainless steel handrails for example.
- Stair railings shall not have "climbable" horizontal elements; stairwells shall not allow for individuals to hide in the landing.

Secure Stairs

- One secure detention stair is to be located adjacent to one of the secure detention elevators.

Stair Finishes

- Convenience stairs must have finishes similar to the floor levels they serve.
- *General Requirements:* Where internal stairways are used for both general vertical circulation and emergency egress, finishes shall be consistent with the floors being served by the stair.

- *Floors:* In general circulation stairs, flooring for stairways, treads, and landings shall provide acoustic control. Resilient materials are most appropriate and shall be combined with a non-slip nosing on the treads; these must be non-combustible. These surfaces shall be coordinated with materials of the floors, which the stair serves. Utility and egress-only stairs shall be of unfinished, sealed concrete or steel. Always provide nonslip nosings.

- *Walls:* Wall surfaces in these areas shall be drywall substrate with a simple, straightforward finish such as paint or wall covering. In utility and egress stairs, provide a painted or unfinished surface. Detainee stairs shall have painted masonry or painted concrete finishes consistent with finishes in central holding area.

- *Ceilings:* Ceilings shall be made of absorptive materials, in stairways for their acoustic effect. Stair runs shall have painted gypsum board soffits where appropriate.

- *Doors:* Doors between adjacent building areas and stairways shall match other doors in the building areas. The doors shall have the same finish on the interior and the exterior. Utility and egress stair doors shall be painted metal.

Stair Performance Requirements

- All stair design (egress, public, staff, and detainee stairs) shall be ~~consider~~ contrasting colors or materials at the top and bottom landings to highlight the change in elevation. Contrasting stair stringers and treads to aid in stair navigation shall be ~~considered~~ as well. Stair lighting shall be located in a way that fixture maintenance and lamp replacement can be completed without scaffolding or lifts.

4.9 Elevators and Escalators System Requirements

Elevator and Escalator

This section provides Design and Construction Standards for the vertical transportation systems provided for the Project.

Design Intent

The design intent is to provide the New Courthouse a functional vertical transportation design that shall enable them to have reliable long term use of the equipment with minimal life-cycle maintenance cost. In addition, the design shall ensure that all anticipated traffic and conveyance needs are properly addressed for each user type.

General

In order to properly select the type and quantity of vertical transportation systems, including elevators, escalators, etc., a comprehensive vertical transportation traffic analysis is required. The analysis must be performed by an independent consultant not associated with any manufacturer or elevator equipment supplier. A separate traffic analysis must be supplied for passenger and service elevators. Additional analysis must also be provided for the Parking Structure.

The traffic analysis and simulation studies shall be used in determining the quantity, capacity of speed of all proposed elevator systems. A report, documenting the results of the analysis shall be provided. Reports shall be accompanied by all necessary supporting data to confirm and justify the proposed vertical transportation systems. Supporting information including, but not limited to, design assumptions (population estimates, etc.) analysis printouts, alternate schemes, etc., shall be provided as part of the report.

The criteria used to evaluate vertical transportation are “Average Interval” and “Handling Capacity” and are defined as follows:

- Average Interval: Intervals are the average amounts of time, in seconds, between elevators leaving a main terminal during 5-minute up-peak periods. Intervals shall be less than 45 seconds during a peak 5-minute period.

- Handling Capacity: The number of people that the elevators can transport during a five-minute two-way peak period expressed as a percentage of the population. Handling Capacity shall be designed for a minimum of 15% during the 5-minute two-way peak period.

Direct plunger or twin post hole less hydraulic elevators may not be utilized. Traction (geared or gear less) elevators shall be used in all instances where travel exceeds 30 feet. The use of machine room less (MRL) elevators shall be considered for capacities up to 5,000 pounds.

The period normally selected for elevatoring design calculations and evaluation of elevators in courthouse facilities in the peak condition with two-way traffic that is likely to occur.

4.6.3 Applicable Codes and Standards

International Building Code 2018 (IBC)

American Society of Mechanical Engineers A17.1 2013

American Society of Mechanical Engineers A17.2

American Society of Mechanical Engineers A17.5

National Fire Protection Association 70 (NFPA)

National Fire Protection Association 101 (NFPA)

Americans with Disabilities Act (ADA)

State Fire Marshall

Local Codes

Occupational Safety and Health Administration

American Society for Testing and Materials (ASTM)

Population Determinations

The number of people requiring passenger elevator service in a courthouse building is a function of the number of courtrooms and their locations, the location of various support activities and the passenger destination. It is reasonable to estimate the number of persons requiring a service based upon their attraction to these activities. The peak hour passenger elevator population densities vary by the type of facility and the projected area occupancy. Courtrooms are designed for a jury trial. There will be spectators from time to time, the judicial staff (about 12 to 16 people) and the jury (12 to 16 people). By using a value of 30 people per courtroom plus expected spectators, a reasonable population can be established for each courtroom. Another vertical transportation design concern is the handling of jurors. Prospective jurors gather in groups of 20 to the various courtrooms. Because jurors are usually escorted in groups, separate elevators large enough to transport the number of jurors (16 to 20 people) may be required to move them vertically. The Parking Structure populations shall be based upon on an average of about 1.5 persons/automobile.

General System Descriptions

All passenger elevators shall be 4,000 pound machine room less elevators traveling at a speed of 350 f.p.m., and having regenerative drives.

Service elevators shall be 5,000 pound machine room less elevators traveling at a speed of 200 f.p.m. to 350 f.p.m. and having regenerative drives. Stainless steel (5WL pattern) cabs, entrances and vandal resistant fixtures shall be used.

Elevator controls shall be group automatic for the passenger groups and typical selective collective on the prisoner and service elevators. Controls shall include independent service, card reader controls and security controls, fire operation, and standby emergency power operation.

At a minimum, the following types of vertical transportation systems shall be provided:

Public Elevator Banks

- Public elevators shall be provided for the New Courthouse. Elevator numbers shall be determined based on analysis studies with a minimum capacity of 4,000 pounds in order to comply with gurney accommodation requirements. Door width and type shall be provided to accommodate stretcher.
- 4,000 pound passenger elevator cab shall have an interior clearance of be 7’-8” wide by 5’-5” deep and 4'-0” wide by 7’-0” high, single speed, center opening doors.
- Public elevators shall open to each public corridor floor.
- Ground floor elevator lobby shall be visible from the public lobby screening station.
- Controls shall be designed to allow denial of access to any floor by key, card reader or Security Control station.
- If elevators serve basement level, restrict access via key, card reader or Central Control.
- All passenger elevators shall be provided with CCTV to building security and show elevator position in single display in security control room. One elevator shall have emergency control by security control room.
- Ceiling height shall be 9’-0”.
- Provide engraved car number, signage, and vandal resistant car and hall buttons.

Judges/Staff Elevators

- Provide secured access for judge elevators with direct access from the secure parking to chamber areas. These elevators shall be available for secure use by judges to access court floors.
- All judges elevator shafts and elevators shall serve all floors of the building.
- Judges elevators shall be separated and secured from public areas.
- Minimum capacity shall be 3,500 pounds with single speed, side opening doors.
- Elevator cab shall have an interior clearance of 6’-8” wide by 5’-5” deep with 3’-6” wide by 7’-0” high, single speed, side opening doors.
- Elevator shall be restricted and controlled by card reader or Building Security.
- All judge’s elevators shall be provided with standby power operation.
- Ceiling height shall be 9’.
- Provide engraved car number, signage, etc., and vandal resistant car and hall buttons.

- All judicial staff elevators shall be provided with CCTV to building security and show elevator position in single display in security control room. One elevator shall have emergency control by security control room.

Custody Elevators

- One custody elevator shall be located adjacent to one custody stairwell and one court floor holding area and empty into Central Holding.
- One secure detention stair is to be located adjacent to one of the secure detention elevators.
- For basic design purposes, all custody elevator shafts and elevators shall serve from sally port level to all courtroom floors.
- Provide one custody elevator and stairway per each two courtrooms.
- Provide clearance inside of 5'-8" wide by 10'-0" deep with a minimum capacity of 5,000 pounds. Elevator shall accommodate a gurney.
- Cab height shall be 10'-0". Provide 14 gauge rigidized stainless steel cab, returns, transom, and doors.
- Provide 4'-6" wide by 8'-0" high two-speed, side opening doors.
- Lobby call buttons shall be controlled by key, card reader or remote Security Control panel.
- Provide voice and visual communications between elevator and Security Control.
- Provide vandal proof buttons. Cab interior shall consist of 14 gauge stainless steel walls and canopy. Flooring shall be aluminum diamond plate. Emergency exit shall be equipped with custody grade lock and alarm. All fasteners shall be tamper proof type.
- Provide security cage across the middle of the platform to secure prisoners in the rear section of the cab to separate detainees from the deputies/security officers.
- All custody elevators shall be provided with CCTV to building security that shows inside elevator and elevator location on a single display and standby power operation.
- One elevator shall be capable for remote operation with car controls in Security Room.

Service Elevators

- Service elevators shall be provided for deliveries, document transport, trash removal and building maintenance.
- Provide a clearance inside of 5'-8" wide by 9'-4" deep (or similar based on manufacturer's standard) with a capacity of 5,000 pounds. Elevator shall accommodate a gurney.
- Cab Height shall be 10'-0". Provide 14 gauge rigidized stainless steel cab, returns, transom and doors.

- Elevator cab shall have an interior clearance of 4’-6” wide by 8’-0” high two speed, side opening doors.
- Elevator shall service loading dock and all floors, including mechanical penthouse.
- Elevator shall not have direct access to court floor holding or central holding areas.
- Elevator shall not be directly accessible from public corridors.
- Elevator shall be restricted and controlled by key, card reader or Security Control.
- All service elevators shall be provided with CCTV to building security and standby power operation; show elevator position on a single display in the security control room.
- Provide engraved car number, signage and vandal resistant car and hall fixtures.

Witness Wheel Chair Lift

- Provide as required to meet Federal standards.

Escalators

- Where traffic demands on upper or lower levels are impacted by high-volume public areas, escalators may be provided to supplement the elevator systems.
- Escalators step width shall be 48” with a speed of 100 f.p.m.
- If escalators area provided, they shall always be paired with a stairway system.

Objectives and Functional Use

Passenger elevators shall have the capability of handling the anticipated traffic loads for each area of service. Interior finishes shall be durable and easily removed and repaired. The elevator shall have durable fixtures, flooring and nickel silver sills. Elevators shall have remote monitoring and CCTV.

Service elevators shall be designed to handle all the anticipated passenger traffic as well as meeting material moving requirements. Elevator cabs shall be constructed of rigidized stainless steel wall panels, returns and doors, with nickel silver sills. Elevators are to have remote monitoring and CCTV.

All vertical transportation shall be designed for maximum reliability and equipment longevity. The equipment shall be designed to handle material and equipment needs of the New Courthouse. The user experience shall be pleasant with acceptable wait times, provided for each type and use of the equipment and its location.

General Quality of Materials and Construction

Planning shall be based upon gear less traction machines, heavy duty door operators with closed-loop operation, LED lighting in car and hall and heavy duty vandal resistant fixtures.

Elevators shall be designed with 16 gauge cabs, and welded entrance frames shall be constructed of stainless steel type 316. Passenger cabs are to have ceilings at 9'. Service cabs and custody cabs are to have ceilings at 10'.

Flooring is to be poured epoxy. Entrances shall be filled with grout up to 5' high.

Performance

The vertical transportation shall be heavy-duty equipment designed to be durable and perform reliably in a heavy use environment while minimizing long term maintenance costs. Elevators shall be designed to provide service in intervals acceptable to each area's needs. Service/freight needs of the New Courthouse need to be included in the overall project design.

Elevators

The effectiveness of a group of elevators is judged by comparison with established standards of performance which relate to the frequency of elevator service and the ability of the elevator system to carry passengers, wheelchairs, etc., as they require vertical service.

Average Interval

TYPE OF SERVICE	AVERAGE INTERVAL (SECONDS)
EXCELLENT	UNDER 45
GOOD TO AVERAGE	45 TO 47
POOR	47 TO 49
UNACCEPTABLE	OVER 50

Normal loading time for an elevator at the lower floor dispatch lobby during the two-way peak usually varies between 40 – 45 seconds. Therefore, this range is considered optimum for a minimum dispatching interval.

However in courthouse buildings when the two-way peak traffic interval exceeds 50 seconds, passengers waiting for service shall tend to queue up in the elevator lobbies during these peak times.

The evaluation table for this suggested group handling capacity performance standard (5 minute, two-way peak) is as follows:

	COURTHOUSE	PARKING STRUCTURE
RATING OF SERVICE	GROUP HANDLING CAPACITY (PERCENTAGE OF POPULATION MOVED)	
EXCELLENT	OVER 15%	OVER 10%
AVERAGE TO GOOD	13 TO 15%	8 TO 10%
POOR	11 TO 13%	6 TO 8%
UNACCEPTABLE	UNDER 11%	UNDER 6%

Passenger traffic counts for persons utilizing elevators typically show a correlation between the type of building occupancy and use and the percent of that population which can be expected to arrive at the terminal floors during peak 5 minute periods. If the elevators do not have ample capacity to carry this load, passengers begin to congregate in the lobbies. Cars may arrive with an acceptable frequency, but all the prospective passengers cannot be loaded.

As a general rule, we recommend that the calculated passenger elevator group handling capacity be at least 15% of the estimated New Courthouse elevator population and 10% of Parking Structure population.

Parking Structure Designs

When designing the Parking Structure passenger elevators, the following elevator design assumptions are pertinent:

- In a Parking Structure, the two-way peak, 5 minutes is normally utilizing a 8-10% handling capacity requirement for the elevator design.

System Maintenance and Service

The vertical transportation equipment shall be free of defective material, imperfect work and faulty operation not due to ordinary wear and tear or improper use or care, for a period of one year from final acceptance of all vertical transportation work. Defective work shall be repaired or replaced at no additional cost during such one-year period.

Regular maintenance shall include examination, adjustment, greasing, oiling, parts replacement, tests, and emergency service.

~~The following service response times shall be guaranteed:~~

- ~~Time from receipt of call to mechanic arrival in response to a call for emergency adjustment or repair shall not be more than 30 minutes during Operating Hours.~~
- ~~Time from receipt of call to mechanic arrival in response to a call for emergency adjustment or repair shall not be more than 60 minutes during non Operating Hours.~~
- ~~Time from receipt of call to mechanic arrival in response to a call for a passenger entrapment shall be not more than 30 minutes at any time.~~

The vertical transportation shall be maintained to operate at the original contract speed, keeping the original performance times, including acceleration and retardation as designated by the manufacturer. The door operation shall be adjusted as required to maintain the original door opening and door closing times, per code.

~~Regular maintenance to be performed during regular working hours of regular working days.~~

Conduct safety tests as required by local jurisdiction and the State of Maryland, including test weights, instruments, and submitting documentation to the appropriate authority.

Basis of Design

Elevators

Machine Room Less (MRL) elevators are to be used, with control rooms, regenerative drives, heavy-duty door operators, vandal resistant fixtures, nickel silver sills, and remote monitoring.

All equipment is to be designed for maximum reliability under heavy duty applications.

Security

Each elevator shall be equipped with card reader and CCTV provisions in order to allow future flexibility for elevator use. Installation provisions shall be coordinated to the extent that final use and needs are known in advance.

Elevators shall have a monitoring panel located in the building security control room.

4.10 Furniture, Fixtures and Equipment (FF&E)

The New Courthouse shall be fully furnished with all required FF&E, including modular workstations, office furniture and all seating and equipment ready by the occupancy readiness date. The New Courthouse shall be fully furnished with all required FF&E, including modular workstations, office furniture, all seating and equipment, by the Occupancy Readiness Date.

There are three types of FF&E for purposes of this Project Agreement:

1. Project Equipment
2. Movable Furniture, Fixtures and Equipment
3. County Furnished Equipment

Each as further described in Sections 1.1 and 7.17 of this Project Agreement.

Pursuant to Section 7.17 of this Project Agreement, the Project Company shall acquire, furnish, pay for (subject to reimbursement by the County) and install all Movable Furniture, Fixtures and Equipment, and the County shall acquire, furnish, pay for and install all County Furnished Equipment. Movable Furniture, Fixtures and Equipment and County Furnished Equipment shall consist of the following:

a. Movable (loose) furniture: Non-fixed seating and chairs, desks, non-fixed tables, non-fixed bookcases, single non-fixed office file cabinets, non-fixed podiums, credenzas, magazine racks, brochure racks, and children's games.

b. Telephone equipment: Voice Over IP (VOIP) telephones and VOIP systems and gateways.

c. Telecommunications equipment: Data network switches and routers, desktop personal computers, copiers, printers, and scanners.

The County, in consultation with the Project Company, shall create a specific list of Movable Furniture, Fixtures and Equipment in accordance with Section 7.17 of this Project Agreement. Custom built-in furnishings shall not be considered Movable Furniture, Fixtures and Equipment.

The Project Company shall be fully responsible for providing all Project Equipment, which includes all FF&E other than the Movable Furniture, Fixtures and Equipment and County Furnished Equipment identified in Items a, b and c above regardless of whether it is movable or not movable, data, audio visual, door access, court technology systems equipment and security system components.

The Project Company shall provide integrated interior design services including the space planning, specification, coordination, integration and design of all FF&E. The design of these elements shall be integrated with the overall design intent of the New Courthouse. The Project Company shall provide all procurement services for Movable Furniture, Fixtures and Equipment and Project Equipment. The Project Company shall coordinate the delivery, storage, handling, installation, site protection and connection of all Movable Furniture, Fixtures and Equipment and Project Equipment.

Vehicular Equipment

Vehicular equipment shall include dock levelers, dock bumpers and hydraulic dock lifts. Parking control equipment shall include automatic barrier gates, vehicle detectors, traffic controllers, access control units and exit terminals.

Other Equipment

Other equipment shall include factory-fabricated metal lockers including 24" deep by 24" wide by 84" tall, single tier and double tier types for padlock to be used.

Institutional Equipment

Detention furnishings such as gun lockers (located at building entrance, vehicular sally port and other locations throughout the building), key cabinets, eye wash, benches, and seating for inmate areas shall be provided.

4.11 Interior Partitions, Doors and Finishes

Finishes and colors to create and promote a calm and respectful environment, prevent glare and minimize artificial lighting requirements shall be used and selected. For areas in which wear is a concern, such as areas with anticipated pedestrian or wheeled traffic, durable finish materials able to withstand damage and easily replaceable in sections if damage does occur, shall be used. In areas where finishes and systems of installation shall occur and water is anticipated to be present as part of cleaning or other procedures, water shall be collected and exited without causing damage to the finishes or substrate. Acoustic characteristics of finish materials shall also be a priority consideration.

Interior Partitions

The three (3) security and circulation zones of the New Courthouse are Public, Restricted and Secure, and each varies in its level of construction and finish. ~~Partitions in public and restricted (staff) areas are typically metal stud partitions with gypsum board covering.~~ Walls surrounding spaces that require acoustic privacy, such as courtrooms, hearing rooms, judges' chambers and jury deliberation rooms shall extend to the underside of the floor above.

Steel stud framing shall be constructed to accommodate electrical, plumbing and other services in the partition cavity, as well as to support fixtures, wall cabinets and other such wall-mounted items. Reinforcement and backing shall be provided.

Gypsum board shall be no less than 5/8" in thickness. Glass mat surfaced gypsum sheathing board shall be used wherever exterior gypsum sheathing is required at exterior walls. The minimum standard for steel studs layered gypsum wallboard assemblies is 20 gauge unless a lighter gauge is required for acoustical reasons. Industry recommendations for deflection and span shall be complied with.

Airborne sound insulation shall be provided for gypsum board/steel stud assembly to close off air leaks and flanking paths by which noise can go around the assembly. Assemblies shall be constructed airtight. Where it is necessary to install back to back devices in a single stud space, additional drywall separation between devices within the stud space to reduce sound transfer between rooms in order to meet requirements outlined Section 2.1 Room Data Schedule shall be provided. In addition, any opening shall be cut for fixtures to the proper size and appropriately seal piping penetration. Conduit/duct/piping penetrations shall be sealed with tape and filled at the plenum barrier. The entire perimeter of a sound insulating assembly shall be airtight to prevent sound flanking. An acoustic caulking compound or acoustical sealant to seal between the assembly and all dissimilar surfaces (including at window mullions) in accordance with the recommendations of an acoustic consultant shall be used.

Non-load-bearing Steel Framing- Used to support interior partitions and suspended ceilings finished with plaster, veneer plaster, gypsum board, and similar products. Non-load-bearing steel framing typically includes metal furring applied to interior surfaces of concrete and masonry walls, and grid suspension systems that support ceilings finished with veneer plaster or gypsum board.

Gypsum Board- Sound attenuation insulation and cementitious blacker units for tile area shall also be specified and provided because they are often installed with gypsum board. Examples of gypsum board types include Type X; Abuse-resistant in inmate areas.

Gypsum Board Preparation for Painting- Primer shall be prepared and applied to gypsum panels, to surfaces that are clean, dry, and smooth, open joints and damaged surfaces shall be pre-filled using setting-type taping compound. Setting type taping shall be used for embedding, first and second coats shall be used on joints and fasteners and trim flanges shall be used for installing paper faced metal trim. The third coat shall be some type of drying all-purpose compound. The skim coat for a Level 5 finish shall be a drying type all-purpose compound or high-build interior coating product applied by airless sprayer.

Gypsum Board Finish Levels- Finish panels shall be according to American Society for Testing and Materials (ASTM) C 840. Public spaces like courtrooms, shall have a Level 5 finish, while all other spaces shall be a Level 4 finish.

Gypsum Board Shaft-Wall Assemblies-Non-load-bearing, steel-framed gypsum board assemblies that shall provide fire-resistance-rated enclosures for vertical shafts and horizontal enclosures.

Joints shall be designed and constructed such that there is no opportunity to hide contraband for later retrieval, and the design of assemblies shall be such that there is no opportunity for ligature.

Miscellaneous Carpentry- Miscellaneous carpentry partitions shall include wood framing, incidental rough carpentry required for the support or attachment of other construction, minor interior wood trim, shelving and clothes rods. Pressure-preservative-treated and fire-retardant-treated wood, concealed rough carpentry (such as furring, clocking grounds and nailers) shall also be included.

Fire-Resistive Partition- Where gypsum board systems are required to provide fire resistance ratings, wall assemblies shall be designed and tested by fire testing laboratories acceptable to authorities having jurisdiction. Fill, void, or cavity materials in the form of liquid-applied sealants shall be provided. All other systems for floor-to-floor, floor-to-wall, head-of-wall, and wall-to-wall joints, perimeter fire-resistive joint systems for floor-to-wall joints between the perimeter edge of fire resistance-rated floor assemblies and exterior curtain walls shall be provided.

Wall Finishes

All of the walls in the public corridors/waiting areas shall have a durable, hard material to a minimum of five (5) feet high, but ~~is preferred to~~ may align to the top of door frames or to be full height. Chair rails, wainscoting, or similar protective materials shall be provided for conference rooms and meeting rooms.

Floor Finishes

All floor surfaces shall be slip resistant. All building entrances shall have walk-off mat systems to improve indoor air quality through the reduction of dirt and dust tracked into the building and to reduce maintenance of indoor floor coverings. A system of exterior and interior walk-off mats flush with the floor surface directly in front of the main entry doors and after the lobby shall be provided. Mats shall be removable, cleanable and replaceable.

Terrazzo flooring: Thin-set, epoxy-resin terrazzo flooring shall be provided at all public areas (lobby, public corridor, public waiting and public restrooms).

Suitable flooring shall be used throughout the accused/offender areas and where cleaning on a regular or emergency basis is necessary. Anti-static flooring materials for telecommunication rooms shall also be used.

Consistent with the expected functional lifetime, carpet shall be selected that is durable, low-maintenance and with the 20 percent minimum recycled content. Carpet appropriate to the traffic expected in the space shall be as specified: courtrooms and offices are to be (mid grade) minimum 26 oz. to 28 oz. loop pile and minimum 1/10 gauge; chambers are to be (premium) minimum 28 oz. and minimum 1/10 gauge and may be cut pile. Nylon, olefin or polyester products for durability with three-to-four-ply yarn are required. Loop pile is to be solution-dyed nylon. Hybrid carpet systems with attached pad may be used. Broadloom shall be a minimum of 12' wide to minimize seams. Carpet tiles shall be standard 24" square. For higher acoustic values, urethane-backed tile or urethane cushion on broadloom are required. Products must meet the Carpet and Rug Institute standards for indoor air quality. Carpet on ramps or courtroom platforms shall meet wheelchair access requirements.

Ceramic Tile Work For installations on wet and exterior surfaces, floor tiles that have the following static coefficients of friction as per the American Society for Testing and Materials International (ASTM) shall be used:

- Level Surfaces: Not less than 0.50 for wet and dry conditions.
- Stair Treads: Not less than 0.60 for wet and dry conditions.
- Ramp Surfaces: Not less than 0.60 for wet and dry conditions.
- Crack isolation membranes shall be provided to resist crack transmission from the substrate due to lateral movement; design for use in thin-set applications of tile over a cracked substrate. Elastomeric sheets or trowel-applied materials suitable for subsequent bonding of ceramic tile shall be used.
- Ceramic tile shall be set with latex modified mortar, and all grout shall be epoxy-based.

Ceiling Finishes

All ceilings are an important design element that shall be coordinated with floor, wall and building structure. The ceiling shall organize and coordinate all devices, sprinkler heads and light fixture locations. Maintenance access shall be considered as part of the ceiling design, including easily removable ceiling systems.

Public circulation ceiling materials shall be durable and decorative.

Courtroom ceilings shall have design attention equal to the vertical elevation of the room, but not distract attention from the proceedings. Required technical features through the use of ceiling soffits, coffers and materials to accommodate acoustical material, lighting, sprinklers, speakers, cameras, projectors and projector screens shall be integrated.

Judicial officer offices' and conference rooms' ceilings shall be designed to present a quality appearance and integration of acoustic panels and lighting.

Acoustic Treatment

Sound control shall include the following:

- Attenuation of sound within public, user and staff environments.
- Sound isolation between the exterior and interior spaces.
- Sound isolation between interior spaces within the New Courthouse at both horizontal and vertical separations.
- Sound and vibration isolation of building service noises and sound isolation of building service rooms.
- Sound isolation as required for specialty rooms such as video-conferencing.

Where penetrations are necessary, placing them back-to-back and next to each other shall be minimized. Electrical boxes shall be staggered by at least one stud space. Mineral fiber insulation shall be used to seal joints around all cut-outs such as electrical, TV and telephone outlets, plumbing escutcheons, and recessed cabinets.

Construction such as ducts, rigid conduits, or corridors that act as speaking tubes to transmit sound from one area to another shall be minimized. At common supply and return ducts, sound attenuation liners at the diffuser and grill to maintain assemblies' STC shall be provided and sealed around the conduit.

Ducts, pipes, and conduits with resilient, non-rigid boots or flexible couplings where they leave vibrating equipment shall provide resilient gaskets and sealant where they pass through walls, floors, or other building surfaces.

Acoustic screens, vibration isolators, and exterior equipment shall be used to prevent exterior noise. All building systems must be designed so that they do not produce more than 50 dBA at night and 60 dBA during the day when measured at the property line of the Project Site.

Paint

All paint materials shall be rated under the Environmental Notation Systems (NTS) with acceptable VOC ranges.

- Eggshell or semi-gloss shall be used for walls, and for all accused/offender areas, semi-gloss shall be used.

- Semi-gloss shall be used for all door frames and metal doors.
- Clear coat interior rub shall be used for all wood finish doors.
- Semi-gloss shall be used for all paint grade doors.
- Eggshell paint shall be used for all ceilings.
- A 2-component (base component A, curing agent B) shall be used for concrete floors.
- Exterior paints of a quality designed to protect substrate materials from weather and climate conditions shall be used.
- A visually harmonious and aesthetically coordinated appearance shall be used across all areas of the New Courthouse.

Secure Detainee Areas

Refer to Section 4.19 Central Holding Unit Requirements for interior partitions, doors and finishes on secure detainee areas.

Interior Doors

All doors shall be located so they have sufficient maneuvering space inside and outside to be accessible. Automatic door openers on interior doors shall not be substituted for maneuvering space in new construction. All doors shall be designed at standard widths and heights. Courtroom vestibules and public entries to departmental spaces shall have solid core wood doors with vision panels.

Flush Wood Doors- Provide flush solid-core doors for typical interior conditions. Fire-rated and non-fire-rated architectural flush wood doors and solid-core units including those with face panels of wood veneer shall be provided. Wood products shall be FSC certified with no added urea formaldehyde.

Complete fabrication, including fitting doors for openings and machining for hardware that is not surface applied before finishing.

American Wood Institute (AWI) premium grade doors with transparent finish shall be used at all courtrooms. AWI custom grade doors with transparent finish shall be used for judges' chambers offices, department entrances, private offices and conference rooms. Paint grade doors shall be used in back-of-house areas.

Aluminum Door Frame- Interior aluminum frames for wood or metal doors and for glazing installed in gypsum board partitions shall be anodized, high-performance finishes.

Hollow Metal Door Frame- Standard and custom hollow metal doors and frames fabricated from steel and metallic-coated steel with sidelight, transom and borrowed-light frames shall be provided.

Access Doors and Frames- Wall and ceiling access doors and frames fabricated from prime-painted steel sheet, metallic-coated steel sheet, and stainless-steel sheet panels and installed in masonry, concrete, gypsum board, plaster, veneer plaster, ceramic tile, and acoustical tile surfaces shall be provided. Wall doors shall be full height with no curb.

In selecting finishes, locally sourced materials shall be given preference. Readily available products that take into account constructibility, lead time and ease of maintenance shall be chosen.

Interior Windows and Storefronts- Fixed interior aluminum framed windows shall have an anodized high performance finish.

Wayfinding

Signage directs visitors and staff to where they need to go, and contributes to a positive experience in the courthouse by orienting users and minimizing confusion. The many functions and high volume of daily users requires a successful signage program. Too many signs in one place, at entries, lobbies and in corridors is unsightly, results in confusion and undermines dignity of the judicial system.

Digital and static signage systems for easy public wayfinding shall be provided. Following public security screening, an interactive/touch-screen map and directory located near the information desk and/or Court Service Center shall be provided. An electronic court docket display shall be located outside each courtroom. All courtroom electronic signage and dockets shall be programmed centrally.

Spaces requiring public access shall have clear identifiable signage that is visible from the public corridors. Signs at key space locations shall be mounted perpendicular to the path of travel for easy identification and wayfinding. Directional/wayfinding signage shall be integrated with the building design and meet accessibility requirements.

All signage must meet the requirements of the Americans with Disabilities Act (ADA) and International Building Code (IBC). Braille lettering and audio signals shall be provided at elevators and where required by codes. Multilingual signage or public notices and informational material are to be provided in the lobby area.

The graphics and signage programs shall be developed during early design stages to integrate signage with the architectural design concept, functional program and building circulation. Legible signs showing directions and information shall be incorporated into design of all public areas. Logically and consecutively number the rooms, all rooms shall be sequential. English and Spanish signage shall be required in the lobby and courtroom doors to indicate code of conduct.

Provide the following specialty signs:

- Building Exterior Signage as part of the landscape
- Courtroom signage
- Building Entry
- Building Dedication Plaque

The courthouse entrance shall be clearly marked with signs indicating that all persons and articles entering the facility are subject to search, that no weapons of any kind are allowed and that violators are subject to fine and arrest.

All signage at the entry to preserve a unified and attractive facade shall be restricted.

The Building Directory shall be located on the information wall on the first floor. The building directory shall contain a diagram listing all major building components. This directory shall be located in a visible area right after security screening and may be integrated into an information booth or kiosk. Provide digital or static signage for elevator lobbies with information about various occupancies on that floor.

Rooms shall be numbered logically and consecutively to enable visually impaired persons to make assumptions about where their destination is located. Public room numbers shall be sequential. Room label signage at doorways shall be positioned where sight-impaired persons expect to find information. Signage of building management rooms, which are not accessible to the public shall be located in different areas than accessible signage.

A consistent, controlled system of other signs, such as restricted access warnings, directional signs, signs designating services for persons with disabilities and procedural guides shall be provided. If high-volume functions, such as the jury assembly room and public counters are not immediately visible from the entry lobby, prominently display graphics to guide users to these areas.

Specialties

Architectural Woodwork
Interior Architectural Woodwork shall include fabricated wood products for use on the interior of the building. Architectural woodwork manufactured in a woodworking plant and by complying with AWI Premium or WWA standards of quality for material and workmanship for courtroom court sets, chamber shelving, public lobby security stations, public lobby information desk, wall and ceiling paneling, and running trim shall be accommodated.

Also included shall be items of woodwork permanently attached to the building and exposed to view. Architectural woodwork generally involves items custom fabricated for an individual project, as opposed to mass-produced moldings or furniture. Woodwork can be specified to be shop or field finished. Also included are specified items, such as standing and running trim that are frequently neither shop fabricated nor custom made and are usually considered finish carpentry rather than woodwork. They are included for applications where a higher level of quality is desired and a woodworking standard shall be referenced to specify that level of quality. American Woodworking Institute (AWI) premium-grade hardwood veneer paneling, stained and finished with a transparent sealer shall be provided. The technique of using “book matched” panels shall be limited to small areas of highlighting and not for overall rooms or systems, and only where finished walls shall remain exposed.

The cashier transaction counter shall be a ballistic-resistant (Level 2) assembly within four feet of the counter from floor to ceiling.

Drinking fountains shall meet the requirements of Americans with Disabilities Act (ADA). Toilet partitions in public restrooms shall be ceiling mounted and designed to withstand significant wear and tear and abuse. Toilet partition surfaces shall be graffiti resistant and doors shall have self-closing hinges.

In staff restrooms, only the wet wall and floor shall be tiled.

Window coverings shall be provided for visual screening, glare control and use of work areas and courtrooms. Courtrooms with skylights, windows or borrowed light require window coverings to prevent glare, visual distractions and light control during audiovisual presentations. The exterior image of the building shall be considered when selecting the color and materials of window coverings, to provide an image consistent with interior design intent.

All hardware shall be institutional grade. Pins and hinges on all doors located on corridors, lobbies, atriums and other public spaces shall be installed on the secure side of the door or shall be fixed. Latch and lock-sets shall be full mortised type; locks shall have removable key cylinders. Locks shall be grand-mastered and master-keyed. Multiple locks for every lock type shall be provided. Hardware specified for courtroom use shall be of the highest quality and shall be selected for quiet, acoustically optimal operation. Selected doors require electric lock sets or striles and proximity reader card key locking systems.

Vinyl Acrylic Wall Covering
If vinyl/acrylic wall covering is used, vinyl/acrylic high impact rigid sheet shall be provided with a minimum 0.6” thickness with color-matched vinyl/acrylic trim for joint/transitions. A complete packaged system, containing all primers and adhesive shall be furnished. Water-based and non-hazardous primer and adhesive materials shall be used.

County Seal
Provide a metal or composite material of the official seal of Howard County in each courtroom with a minimum size of 32" in diameter.

Flag Poles
Provide two flagpoles and holders in each courtroom to accommodate the State of Maryland flag and United States flag. Flagpoles shall be wall mounted and the location shall not interfere with bench accessibility.

4.12 Corridors, Ceiling and Ceiling Heights

The basic requirements for corridors, ceilings and ceiling heights are the following:

- Corridors shall be developed uniformly throughout the building. Standardized dimensions and layout from floor to floor for each corridor type shall be provided.
- Single-loaded public corridors along exterior window walls on the standardized court floors shall be considered. Double-loaded court floor public corridors may maximize space use efficiency but may reduce the ability to bring natural light to the public waiting areas. Space use efficiency and architectural quality when planning the building circulation systems shall be balanced and considered.
- Ceiling heights in proportion to the size of the space and the number of people using the space shall be designed. High occupancy areas like courtrooms and the Jury Assembly room shall be designed with higher ceiling heights.
- The ceiling plane as a designed space shall be contemplated. The use of articulated ceiling elements including soffits, perimeter coves and recesses that integrate the lighting and HVAC systems into one harmonious whole in the courtrooms and other major public areas must be considered.

Corridor Widths

The following minimum corridor widths shall apply:

- Public Corridors: 12’-0”, depending on code requirements for occupancy loading and amount of public waiting that is provided in the corridor.
- Restricted Corridors: 5’-0”, depending on code requirements for occupancy loading.
- Secured Corridors: Minimum of 7’-0”.

Ceiling

- Hard Ceiling may be of 5/8” gypsum board where fire rating is not required. In fire rated rooms, the gypsum board shall be fire rated and the thickness shall be determined by the rating required by the Howard County Building Code.
- Accessibility to the ceiling spaces where access is required to mechanical, electrical or other service systems must be provided.

Ceiling Heights

All ceiling heights are measured to the face of ceiling finishes. In courtrooms and public lobbies, heights may vary and may be lower or higher than the normal height. Below is a table that illustrates required ceiling heights.

Courtroom	14’-0”
Courtroom Vestibule	10’-0”
Chamber	10’-0”
Public Lobby	16’-0”
Open Plan	10’-0”
Private Offices	10’-0”
Clerk’s Public Spaces	10’-0”
Jury Assembly Room	12’-0”
Jury Deliberation Room	10’-0”
Public Restroom	10’-0”
Public Corridors	12’-0”
Restricted Corridors	9’-0”
Ancillary Spaces	9’-10’
Secure Corridors	9’-0”
Holding Cells	9’-0”

4.13 Court Specific Design and Construction Standards

Court Specific Design and Construction Standards ~~and noted preferences~~ shall include the following:

- All public spaces shall handle surges of people and to maximize separation of potential adversaries, shall be adequately sized.
- Building height shall expedite and minimize the vertical movement of the public and staff and the reliance on elevators shall be reduced.
- Courtroom floor plates shall be standardized. All non-courtroom floors, structural grids, vertical penetrations and floor-to-floor heights shall allow for the future expansion and build out of additional courtrooms. Lower floors of the building may have larger floor plates than the courtroom floors.
- All elevator shafts and associated infrastructure shall be extended through the non-court floors to serve the top floor of the building to allow for the future expansion of courtrooms.
- The Building Security Control Room shall be located at the ground floor entry level on the secure side of the public entry with direct view to the queuing and screening area.
- Courtroom floor fire exit stairs on the restricted corridor can be shared/used by public, judges, staff in an emergency.
- Adequate public queuing area and three weapons screening stations shall be located on the ground floor to reduce public wait times. Queuing lines shall promote separation and maze-like return lines are not allowed.
- Sufficient area for the separation of adversaries and reduction of crowding in front of public elevators shall be provided.
- All building occupants except judges, elected officials and the Sheriff must be required to pass through the weapons screening stations in the public lobby.
- The Jury Assembly Room shall be designed to allow jurors to utilize the restricted corridor system to access courtrooms without crossing the public corridor system for instances of high notoriety or security trials.
- Public queuing and security screening shall be separated by ballistic glazing assembly (minimum level 2) to a minimum 8'-0" high including frames and walls, from the lobby.

4.14 Courtroom & Court Set Design Requirements

The court set includes courtrooms, courtroom vestibule, courtroom storage, AV closet, jury deliberation room, jury support space, robing room, toilet, holding soundlock, holding cell, attorney conference rooms and evidence storage. A restricted corridor with staff elevator and stairs connects the chamber suites with staff offices and secure parking.

The courtroom is the focal point of the judicial process, providing a formal setting for conducting the business of the court, and is the primary place where judicial officers, court staff, attorneys, and litigants or defendants interact. The courtroom accommodates the judicial officer (judge, magistrate and hearing officer), court clerk, reporter, court security officer (CSO), attorneys, witnesses, jury, and spectators.

The design of each courtroom shall include the following:

- Provide unobstructed sightlines between all participants in the courtroom. The ability of all the participants in courtroom proceedings to see and to be seen is fundamental to the pursuit of justice. Courtroom design must ensure that unobstructed sightlines are provided between all participants' locations and workstations.
- Protect witnesses and jurors from intimidation.
- Provide reasonable confidentiality for attorneys, defendants, litigants, and judicial officers.
- All elements of courtrooms, except employee workstations, must be fully accessible to people with disabilities including all paths of travel, maneuvering spaces, seating and auditory components. Courtroom design for new courthouses shall be accessible without the use of mechanical lifts.
- One of each type of courtroom shall be fully accessible (public and staff).
- Furnishings and layout of the courtrooms shall be designed for maximum flexibility of use by any of the courts with the exception of the large courtrooms. Electrical and low voltage services must be coordinated accordingly to accommodate a flexible layout.
- Access to natural light and fresh air shall be provided. Since many court participants spend most of the day inside courtrooms, access to daylight and fresh air is extremely beneficial. Where possible, provide windows to allow a view to the outdoors, without people outside the building being able to see into courtrooms. "Borrowed light" may be acceptable in some cases where it is determined that it is impossible to provide direct natural light.
- An effective auditory environment shall be designed. All participants must be able to hear and be heard during court proceedings. Judges must be able to have private sidebar conversations without being overheard by others in the courtroom. Assistive listening devices, sound systems and recording devices must be carefully coordinated.

- Future electronic enhancements during courtroom design must be planned. Due to the extensive lifespan of the building, the building must be capable of handling future technological upgrades.

Courtroom Entries

All courtrooms, regardless of whether in-custody proceedings occur there, must require three distinct points of entry:

- *Public*- For spectators, attorneys, witnesses, and press through a vestibule from the public corridor. The doors in the vestibules are used throughout the day and they need to be built so that they allow for a clear line of sight for the Court, but they also need to be as silent as possible as to not disturb the Court.

- *Restricted*- For judicial officers, jurors, court personnel, and designated court participants through two doorways from a restricted court staff corridor. This entrance shall also be used by Court staff while Court is in session. It must be able to open and close as quietly as possible to create the least amount of disruption to the Court.

- *Secure*- For prisoners, detention officers, and CSO's through a controlled, secure entry near the CSO's station and defense attorney table from the secure circulation system. The door from the secure area into the courtroom must be controlled by the Sheriff.

Courtroom Adjacencies

- Courtrooms may be separated by intended usage. Groupings may include Trial Courts vs. Hearing Rooms.

- Courtrooms must be adjacent to courtroom floor holding cells.

- Courtrooms shall be combined and planned into mirrored pairs wherever possible so that Courtroom Holding areas with secure circulation to the Central Detainee Holding area can be located between the two courtrooms.

- If chambers are co-located in an area remote from the courtrooms, such as on adjoining floors, a robing room and conference area may be necessary adjacent to the courtroom.

- Jury deliberation shall be located in close proximity to each trial Courtroom.

Corner Bench or Center Bench Layouts

Courtrooms may be designed with a center bench or corner bench configuration. Each offers different design and operational opportunities. Selection of either is a project decision and shall be based on the following design and operational criteria:

- Optimum sightlines among the judge, jury, attorneys and witnesses.

- Ease of accommodating two courtroom clerks.

- Ability to move paper documents between clerk and judge.

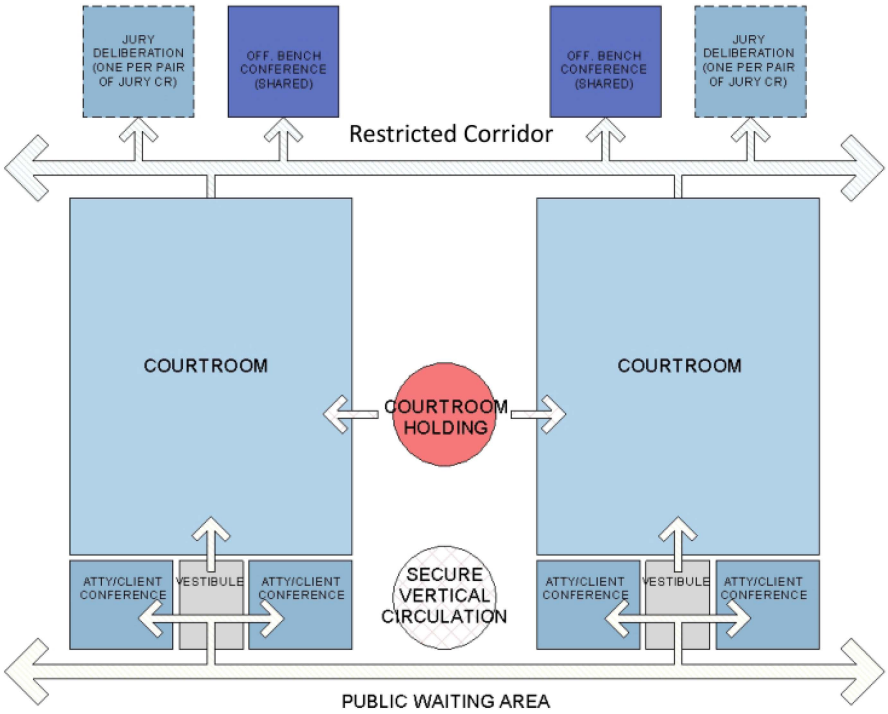
- Sightlines to projected images.
- Dignity and formality.
- Accommodation of courtroom technology and computer equipment.
- Space efficiency.
- Flexibility of changes in technology.
- Meets requirements of American Disability Act (ADA).
- Minimum of one courtroom per type must be fully accessible to all staff and public user stations, including the judge and clerk raised workstation.

The ~~Howard County Circuit~~ New Courthouse shall include the following number and types of courtrooms:

- (1) Large Courtroom
- (5) Standard Courtrooms
- (2) Civil Courtrooms
- (3) Hearing Rooms
- (1) Orphan's Courtroom

For more detail on the functional and operational requirements of the courtroom and court set, refer to Section 1.3 Functional Narrative and figure 4.14 for court set adjacency diagram.

Figure 4.14.1 Court Set Adjacency Diagram



4.15 Courtroom Built-In Furnishings Requirements

All fixed courtroom furniture elements shall be fabricated as custom millwork items, per requirements of the American Wood Institute (AWI), with premium-grade hardwood veneer panels and solid hardwood, stained and finished with a transparent sealer.

The lectern and counsel tables shall be included as standard level features and are not movable FF&E even if they are movable, and shall be selected and/or designed to match the finish of the built-in furniture, including judges, clerk, jury bench and jury box.

Judicial Officer's Bench

The size, location, height area and design of the bench reinforces the role of the judicial officer as the administrator of justice and as the principal controller of order in the courtroom. The bench shall be designed to be the focal point of the courtroom without favoring anyone on the party.

The bench size and height shall be designed to be proportionate to the courtroom and to ensure an unobstructed view from the entire courtroom.

A work surface 72" to 84" wide by 24" deep with a minimum of 3' high privacy screen in the front must be provided. This area must be of sufficient size to keep paperwork and reference materials within reach and accommodate a computer monitor. Under desktop, accessible cable raceways to accommodate voice, data, power and courtroom technology cabling must be provided.

An ergonomic, adjustable desk system behind the casework shell in lieu of custom millwork may ~~shall~~ be considered. This component can be made from modular furniture, providing adjustable desk heights and angles.

Courtroom Clerk's Station

The courtroom clerk is responsible for maintaining a record of case actions and files and for receiving and labeling exhibits. The courtroom clerk must be close to the judicial officer in order to transfer exhibit papers and files by hand and to communicate privately. Additionally, they must be accessible to counsel for marking and introducing documents. The height difference between the clerk's station floor and the judge's bench floor shall not exceed 12'; the constant transfer of files creates an ergonomic problem with a greater difference.

The clerk's station shall be designed similar to the judge's bench, comparable with the courtroom design. A custom casework low front wall with ballistic shielding assembly (minimum level 2) must be provided. Behind the paneling, using a modular furniture work surface with adjustable height to provide flexibility may be considered. Provide bullet-resistant material behind the paneling of the clerk's bench, similar to the judicial officer's bench.

Witness Box

The witness box must be located so that the witness has a clear facial view of the judicial officer, jury, court reporter and counter tables. The witness box shall be located between the judge and the jury.

The witness box shall be designed to comfortably seat the witness and interpreter. Bullet-resistant material behind the paneling of the witness box, similar to the judicial officer's bench shall be provided.

Jury Box

Clear sightlines from each juror to the witness, attorneys, judicial officers and evidence display areas must be provided. The jury box cannot extend past either the witness box or the attorneys' tables. Direct access into the jury box from the restricted corridor to the deliberation room so that the jury does not pass in front of the bench of litigant tables shall be provided. The jury box shall be two-tiered, accommodates people with disabilities and sized to accommodate 14 people.

The jury box must be designed to prevent communication between jurors and the spectators and to guard against juror harassment. A space of 6' between jurors and the spectator area is recommended (The space may be more or less than 6' as long as it still complies with the foregoing requirement to prevent communication and guard against harassment). Provide concealed, accessible raceway to incorporate voice, data, power and audiovisual calling.

Litigation Area

The litigation area, or well, provides space for primary participation in activities of the judicial proceeding. Size varies, depending on courtroom type, and components within the well vary by the type of proceeding.

Counsel tables must be located in the courtroom so that attorneys can be seen and heard by other attorneys, the judicial officer, the witness, the court reporter and the jury. At least two movable, accessible counsel tables with space for comfortable, ergonomic, movable chairs shall be provided. The counsel tables shall be custom casework and shall have either recessed outlets or concealed cable raceways for voice, data, power and courtroom technology. An area behind the counsel tables and between the spectator area for a row of chairs along the railing for staff, paralegals or other involved parties shall be provided.

A movable, height adjustable, universally accessible lectern shall be provided for each courtroom. The lectern shall be floor supported (not tabletop mounted). Recessed floor boxes with outlets for voice, data, power and courtroom technology near the lectern and equipment cart shall be provided.

Spectator Area

The spectator area shall be separated from the litigation area to control movement and reinforce the hierarchy of the participants. This element, also known as the "rail" may be custom millwork or pre-designed and manufactured and shall be a minimum of 32" wide clear opening.

The spectator area provides seating for prospective jury panels, witnesses and interested parties. The number of seats shall be planned to accommodate voir dire panels for jury selection. Benches shall be contoured and proportioned to provide comfortable seating; they shall be hardwood veneer and solid wood construction ~~is preferred~~. Benches shall be anchored to the floor but removable for relocation. Wheelchair spaces, companion seating and semi-ambulatory seating in ratios required by law must be provided.

Judges' benches, courtroom deputies' and court reporters' benches, lecterns, and counsel tables must be designed to accommodate audio system (public address), electronic sound recording equipment, electronic data devices (computers or terminals), and other electronic equipment. Provide concealed, accessible raceway to incorporate voice, data, power and audiovisual cabling.

The judge's bench, clerk's workstation, witness box and jury box must be lined with ballistic-resistant material (UL Standard 752, Level Ill) on all vertical surfaces.

All built in, custom furnishings as part of the Design Build work shall include the following:

- Judicial Officer's Bench with raised platform
- Courtroom Clerks Station(s)
- Witness Box with raised platform
- Court Reporter's Station
- Bailiff's Desk
- Jury Box with raised platform at back row
- Pews shall be solid wood with solid wood seats, solid wood back and solid wood caps.
- Spectator pew with spectator rail – the last row of the spectator pew shall be detailed that the back of the head shall not touch the wall surface to avoid dirt on the wall.
- Courtroom technology integrated attorney tables
- Exhibit display, sound reinforcement and telephone conference systems
- Court Security Officer Station
- American Disabilities Act accessible lectern
- Upholstered, armed, jury seating at the jury box
- Judges chair is movable and provided as part of the FF&E budget and acquisition.
- Witness chairs, Interpreter's chair, Clerk's chair, Bailiff chair and Attorney chairs are movable and provided as part of the FF&E budget and acquisition.
- All required raised platforms, ramps, rails and stair riser
- Built-in flag poles

Miscellaneous Built-In Furnishings

AWI premium-grade hardwood veneer adjustable shelves and casework stained and finishes with a transparent sealer are required. ~~shall be provided~~

4.16 Courtroom Design and Mock-Up Confirmation

An adjustable, full-scale courtroom mock-up at an indoor location within 10 miles of the ~~new Howard County Circuit Court Building site~~ Project Site prior to completion of the Design Development phase shall be provided. The courtroom mock up shall be a full-scale "working model" of the typical circuit jury courtroom, and large ceremonial courtroom which is constructed from lightwood framing and plywood, oriented strand board (OSB), corrugated cardboard, canvas or other "stage set" material. The Project Company shall build the mock-up so that it can be easily moved or modified in the field during a courtroom mock up review which shall be scheduled and facilitated by the Project Company. The mock up shall be reviewed by representatives of the ~~Circuit Court~~ County. The review shall include but not be limited to: the relative locations of courtroom components to one another, furniture size, desk top heights and widths, bench cap heights and locations, sightlines, functional alignments, relative heights of work stations, ease of file and paper flow, traffic flow within the courtroom space, accommodation of computer and audio visual system elements, accessibility and the scale, proportion and massing of all courtroom elements.

The courtroom mock-up shall include enclosing walls and representation of the ceiling plane and all fixed elements and furniture within the courtroom shall be represented in the mock-up. The mock-up shall provide the ability to change the size of the enclosing room to correspond to the programmed size from large courtroom (2,400 sf) to small hearing rooms (900 sf), and the ability to position the millwork stations within the room as designed for each courtroom type.

The Courtroom Mock-ups apply to the Design-Build Period and are not part of the Proposal submitted in response to the RFP. The mock-ups are for the large Courtroom (2,400sf), Standard Courtroom (1,900sf), and Civil Courtroom (1,400sf).

The mock up shall remain in place for at least 30 days.

Courtroom Mock-up Review

The Project Company shall provide the following presentation and review procedures during the courtroom mock-up review:

- Preliminary courtroom design plans, elevations and reflected ceiling plans prior to designing or building the courtroom mock-up shall be reviewed by the County.
- The County's review comments from the preliminary plans into the courtroom mock-up plans shall be incorporated.
- The use of a location and fabrication of the full-scale mock-up model shall be secured and paid for by the Project Company. The Project Company shall review the mock-up fabrication during the fabrication process. The Project Company shall modify the mock-up per preliminary review comments, if required.

- A formal mock-up review shall be scheduled and an agenda shall be prepared and followed. Each courtroom component shall be reviewed on a piece by piece basis. The County's Reviewers shall be allowed to "test" the mock-up components and offer comments. People shall be seated at all courtroom component locations and the quality of sightlines shall be assessed between all locations. Representatives of the Design Builder ~~A/E team~~ and the casework fabricator shall be included. Trained workers to move or make adjustments to the mock-up during the review in response to comments raised during the review shall be provided.
- All comments in a review summary shall be recorded.
- The meeting summary shall be distributed to all participants. Assuming no exceptions to the summary are received, the mock-up design comments and revisions into the courtroom design documents shall be noted.
- Should the initial mock-up review require a follow-up review, the mock-up shall be physically modified in response to the comments received from the County and another mock-up review per the outline above shall be scheduled.
- ~~All final comments and design revisions shall be documents and obtained approval prior to finalizing the courtroom design drawings.~~

4.17 Courtroom Accessibility

Barrier-Free Accessibility

Courtroom areas used by the public must be accessible to people with disabilities. One type of each courtroom shall be fully accessible (public and staff) with staff workstations fully accessible. Staff work areas, including the judge's bench, the courtroom deputy, law clerk, bailiff, and court reporter stations, may be adaptable to accessibility. While all judge's benches and courtroom personnel stations do not need to be immediately accessible, disabled judges and court personnel must be accommodated. It is also recommended that a certain number of private work areas be made accessible during initial design and construction to avoid more expensive alterations for accessibility in the future. Refer to 2010 American Disabilities Act (ADA) Standards for Accessible Design (https://www.ada.gov/regs2010/2010ADAStandards/2010ADAstandards.htm) for required components of the accessible courtroom, and "Justice for All: Designing Accessible Courthouses," (November 2006) from the U.S. Access Board Courthouse Access Advisory Committee (https://www.access-board.gov/attachments/article/432/report.pdf) for guidelines on design of accessible courtrooms. In addition, the courtroom and public areas of the courthouse must comply with Maryland Accessibility Code Guideline for Buildings and Facilities (COMAR 05.02.02) (http://dhcd.maryland.gov/Codes/Documents/AccessibilityCode/Maryland%20Accessibility%20Code%20-with%202010%20ADA%20Standards%2011-18-2011.pdf)

At a minimum, Court participants with disabilities shall be able to approach and use the following spaces in the same way that non-disabled participants do:

- Public seating
- Counsel tables
- Jury box
- Witness box
- Lectern

Accessible Path of travel

Courtrooms require two means of egress, which often requires an accessible path of travel out the back of the courtroom as well. This shall be considered when planning adaptable access for staff areas of the building. Both exits must provide accessible egress from the courtroom. The accessible path of travel to the judge's courtroom workspace (bench), courtroom clerk's workspace, witness box and jury box must address the required floor heights. Separate paths of travel for persons with disabilities shall be avoided. The judge's circulation path must never be in front of the bench.

Ramps vs Lifts

Maintaining sightlines among all participants while providing full accessibility, shall be a priority. Floor levels of courtroom components vary. Level changes shall be achieved as follows:

- Ramps are the preferred solution for providing universal access and operationally functional spaces. Several strategies can be used to accommodate a long ramp to Judge or witness levels at or above 12" AFF. Ramps in the restricted corridor behind the courtroom, or elevating the "back-of house" area in the restricted corridor 6" higher than the courtroom well, can minimize visible ramping requirements in the courtroom itself.

Courtroom Technology

The design shall facilitate the use of Assistive Listening Devices in the courtroom. Accommodations for transmitters and receivers need to be provided in the courtroom ceiling.

Mobile A/V lecterns shall be adjustable in height with adequate knee space to accommodate litigants in wheel chairs or with disabilities.

4.18 Court Services - Central Holding Unit Requirements

The Court Services component of the facility is staffed and monitored by the Howard County Sheriff's Office courthouse security division. Sheriff's Deputies are responsible for transport, custody, and movement of detainees/prisoners into and throughout the secure circulation areas of the courthouse. The Central Holding Unit is the entry point and staging point for all detainees entering and exiting the courthouse. As part of the secure circulation zone it includes secure and controlled areas of the facility where detainees may be present.

The outermost construction of the central holding unit and courtroom holding areas, constitute the secure perimeter. All access points through the secure perimeter into and out of the Central Holding Unit are via sally ports with interlocked doors that are monitored and controlled by Security Officers in the Court Services Control Room (14.44). The design shall accommodate the movement of different categories of Detainees including classification groups that require sight and sound separation (male from female, gang members, adult from juveniles, etc.).

This facility is manned only during Operating Hours of the court, and there shall be no one in custody/detention over-night, or over a 10-hour period under normal circumstances. Design shall comply with relevant Maryland Department of Public Safety and Correctional Services standards and regulations for detention/holding, and shall comply with American Correctional Association Adult Local Detention Facilities, 4th Edition (ALDF), and Prison Rape Elimination Act (PREA).

General Requirements

- Design requirements shall include but are not limited to the provision of: detention grade doors, detention furniture, detention grade security ceilings, institutional security grade fire sprinkler heads, detention grade lighting fixtures, security grade tamper proof fasteners and sealants, continuous slab to slab partitions and demising walls, detention grade electronic locking systems, interior security glazing, detention grade cell construction, partition systems and duct security grills.

- A Graphic User Interface (GUI) electronic security door access control, alarm and CCTV monitoring system within the Control Room in the Central Holding Unit shall be provided, controlling all holding cells, Central Detention entry and exit doors, prisoner transfer elevators, sally port, attorney interview rooms and all pedestrian sally ports. The Control Room functionality shall be backed up at the main Security Room on the Main Floor.

Wall and Ceiling Construction

- Wall and ceiling construction. All detainee areas shall be of secure construction, with secure ceiling, fixtures, walls and doors and hardware. The cell and holding areas shall be of the highest security construction, with security plank ceilings. Corridor ceilings may be of security "lock-down" metal ceilings perforated with acoustic backing, or of secure grade gypsum with metal lathe backing. Secure perimeter CMU walls shall extend from floor to underside of the floor above, shall be vertically reinforced every sixteen (16) inches on center, and shall be grouted solid in all CMU cores. No conduits or piping shall be surface mounted or exposed within the Secure Perimeter.

Secure walls may be constructed of grouted and reinforced CMU 6" thick or greater, 4" thick reinforced precast concrete, or double walled and reinforced grout filled steel cell wall construction, 2" minimum thickness.

All walls within detainee accessible areas must be painted. All floors within detainee accessible areas must be a poured epoxy with integral curbing. All holding cell floors shall be sloped/pitched towards a drain in the corridor outside the cell. All signage within detainee accessible areas must be painted.

Detention Doors and Vision Panels

- All doors in detainee accessible areas of the central holding unit, and courtroom holding area shall be detention grade American Society for Testing and Materials (ASTM) F1915 Grade 2 minimum with all doors comprising the secure perimeter Grade 1. The one exception is the door from the courtroom holding area to the courtroom, which shall be of a material and grade similar to other doors in the courtroom, with commercial hardware, provided a detention door separates the courtroom holding cells and elevator from the courtroom door.

- All security doors in central holding unit shall be sliding doors. Courtroom cells can be swing hinge door cells. Holding cell sliding doors must be automatic (motorized) and activated by the Holding Control Room. Detention frames shall be fabricated from fully-welded unit construction, with corners mitered, reinforced, and continuously welded full depth and width of detention frame. Flush-design detention doors, 2" thick, of seamless hollow construction shall be provided. Detention doors shall be constructed with smooth, flush surfaces without visible joints or seams on exposed faces or stile edges. Knockdown frames are not acceptable. Stops and moldings around solid, glazed, or louvered panels shall be provided. Accessories such as food-pass openings, detention door louvers, speaking apertures and gun ports shall also be provided.

- Detention vision frames that comply with ASTM F 1592 and removable glazing stop test according to HMMA 863 shall be provided, based on testing manufacturer's standard units in assemblies similar to those indicated for this Project.

Locks - Locks and locking devices are important elements in the overall access control and security system of a facility since they "secure" the movable portions (swing doors or sliders) of the barriers (walls). Components that make up a particular security system shall have equivalent performance levels. A door that provides a 2-minute penetration delay shall be equipped with a lock that also provides a 2-minute minimum delay. Elaborate locks shall be used for a door that can be easily picked, where possible.

Lock types include: electrical, electro mechanical, and mechanical. These shall be used in secured areas of the New Courthouse. The type to be used shall depend on the level of security and control required for each specific location. Where maximum security is required, heavy duty electro-mechanical locks are generally used. Unlocking can occur by retracting the latch bolt with either a Paracentric key or by the use of a remote switch in a control room which activates a solenoid or motor in the lock. The door deadlocks automatically when it is closed. Such locks are usually mounted in the hollow metal frame and offer sufficient resistance to physical attack.

When full control of a door or a group of doors is needed, locking devices or mechanisms capable of locking, unlocking, opening or closing the door(s) remotely from a control room can be used.

Where medium security is required, similar smaller electro-mechanical locks are recommended. Mechanical locking (or unlocking) is by the use of a mogul key. For minimum security application, heavy duty mortise cylindrical locks are commonly used. Since these locks are installed in the doors the electrical wires to the locks pass through special hollow hinges. Jamb mounted locks which can be installed in a standard door frame ~~are also being~~ shall be used in the minimum security areas.

Where remote control of the lock and door is not required, a variety of mechanical locks (lever tumbler deadlocks, spring and deadlocks, and pin tumbler cylindrical locks) ~~are being~~ shall be used. Where necessary, for remote monitoring, these mechanical locks shall also be equipped to indicate the locked or unlocked condition of the door ("DPS").

Detention Hardware - The hardware ~~proposed is~~ shall be for two types of security/detention doors:

- Swing Security/Detention Doors
- Sliding Security/Detention Doors

It is noted, if space permits, holding cell gates ~~are preferred to~~ shall be swing doors.

Security Hinges - Three types of security hinges may be used within the design of the project

- Door Hinge: Investment cast, full mortised, non-removable fully concealed pins, with hospital tip for hollow metal doors
- Institutional Hinges: 4 ½" by 4 ½" by 0.188"
- Food Pass Hinges: Cast malleable-iron 3/8"thick with 3/8" diameter hinge pin

Electro Mechanical Detention Locks and Latches- There are three types of electro mechanical detention locks and latches, ~~which~~ their requirements are described below:

- Solenoid-Operated Dead Latches, Mogul:
    - Function: Remote switch activates solenoid that retracts latch-bolt; automatic latching and deadlocking when door is closed (slam locking). Latch-bolt can be mechanically retracted by mogul cylinder keyed one or two sides as indicated in the key schedule.
    - Latch-back: Latch-bolt remains retracted until door is opened 2" then releases as long as control switch is in open position; latch-bolt extends when control switch is moved to locked position
    - Key Hold-back: If latch-bolt is retracted by key, it remains retracted until relocked by key
    - If power fails, latch-bolt automatically deadlocks (fail-secure)
    - Latch-bolt: 1-1/2" high by ¾" thick hardened steel; 1" throw
    - Provide internal deadlock indicator switch

- Provide roller-type deadlock actuator
- Motor: 120 VAC

- Solenoid-Operated Dead Latches, Paracentric
  - Function: Remote switch activates solenoid that retracts latch-bolt; automatic latching and deadlocking when door is closed (slam locking). Latch bolt can be mechanically retracted by mogul cylinder keyed one or two sides as indicated in the key schedule
  - Latch-back: Latch-bolt remains retracted until door is opened 2" then releases as long as control switch is in open position; latch-bolt extends when control switch is moved to locked position
  - Key Hold-back: If latch-bolt is retracted by key, it remains retracted until relocked by key
  - If power fails, latch-bolt automatically deadlocks (fail-secure)
  - Latch-bolt: 2" high by ¾" thick hardened steel; ¾" throw
  - Provide internal deadlock indicator switch
  - Provide roller-type deadlock actuator
  - Solenoid: 120 VAC
- Solenoid-Operated Dead Latches
  - Function: Remote switch activates solenoid that retracts latch-bolt; automatic latching and deadlocking when door is closed (slam locking). Latch-bolt can be mechanically retracted by key cylinder keyed one or two sides as indicated in the schedule.
  - Latch-back: Latch-bolt remains retracted until door is opened 2" then releases as long as control switch is in open position; latch-bolt extends when control switch is moved to locked position
  - Key Hold-back: If latch-bolt is retracted by key, it remains retracted until relocked by key
  - Latch-bolt: ¾" throw
  - Provide internal deadlock indicator switch
  - Solenoid: 24VAC

Track and Hanger Set with Electric Lock Column- Track and hanger set for manually operated doors with adjustable door rollers,stop and rubber bumper shall be provided. Features of the track and hanger set shall include:

- Housing Cover and sloping top: 10-gauge steel
- Door Rollers: 3-3/4" x 1" thick galvanized steel with sealed, anti-friction bearings

- Equal to FA 102-3M

Mechanical Paracentric Deadlocks- The mechanical paracentric deadlocks shall have the following features:

- Case: Drop forged case with 3/8" thick cold drawn steel
- Deadbolt: Galvanized steel with three hardened steel roller pins, 2" x ¾"
- Bolt Throw: ¾"
- Bolt Projection: 1 ¼"
- Cylinder: Investment cast one piece, bronze alloy with paracentric keyway
- Finish: Galvanized

Cylinders and Keying- The mechanical paracentric and mogul cylinders shall be the same manufacturer as for detention locks and latches. The cylinders shall have the following features:

- Paracentric Cylinders: Manufacturer's standard lever-tumbler type, constructed from one-piece spring-tempered brass; with tumblers activated by phosphor bronze springs
- Mogul Cylinders: Manufacturer's standard pin-tumbler type, minimum 2" diameter; body constructed from brass or bronze, stainless steel, or nickel silver; with stainless-steel tumblers and engaging cylinder balls; complying with the following:
    - o Number of Pins: Five or Six as indicated on schedule
    - o Finish: BHMA 606 or 626

The keying and keys for mechanical paracentric and mogul cylinders are as follows:

- Mogul type keys shall be keyed in sets and master keyed, grand mastered, etc., to level as directed by the owner. Provide three keys per change and three keys per master level.
- Paracentric prison locks shall be keyed in sets and provided with three for each set.

Detention Operating Trim- Two types of door pulls are proposed:

- Surface-Mounted Door Pulls: 8-3/4" overall length and 2-1/4" projection; attach to door with two security fasteners
- Flush Door Pulls: 5" high by 4" wide by 1" deep, with 1/8" thick faceplate; attach to door with four security fasteners

Screws, Fasteners and Tools

- Furnish exposed fasteners to match item fastened. Make fastener of the same metal as item fastened, except use plated brass or stainless steel for all aluminum items.
- Provide torx-head (star design with center pin) security fasteners for exposed fasteners on all security hardware, regardless of manufacturer. Furnish six tool holders and six bits for each different size screw.

- The security locks shall incorporate three separate keying systems; one for lever tumbler (Paracentric), one for pin tumbler (mogul cylinder), and one for commercial cylinder locks. Each keying system's keys shall be dye stamped for identification corresponding to the hardware supplier's final schematic keying chart.
- Lever tumbler locks shall be keyed alike or different as directed.
- Mogul cylinder locks shall be master keyed as directed.
- For all individual key designations, to each required individual key cabinet, there shall be two keys provided. For each master key designation, there shall be three keys for each required individual key cabinet.

Surface- Mounted Door Position Switches- Switch enclosed in 11-gauge enclosure, factory primed for painting. Attach with security fasteners. The switch shall be SPTD 10 Amp rated.

Security Glazing Categories

- Polycarbonate- Laminated or monolithic polycarbonate shall be extruded, UV stabilized, but when laminated, uses various layers of urethane resins. Polycarbonate laminates shall have a flexural strength not less than 13,500 psi: (American Society for Testing and Materials D-790,) 180ºF continuous service temperature. Products must conform to all applicable International Building Codes with a CC-1 flammability performance rating.
- Air-Gap Unit- Shall be assembled with laminated or monolithic polycarbonate core as required to meet performance requirements. The polycarbonate core shall be separated from the glass by a ¼" non-rigid edge system that allows the glass to be replaced if broken. Air-Gap Units are not "insulated" or "IG" Units as tested by any industry performance standard.

Security Glazing Types (Glass Clad Polycarbonate)

- Security Glass at detainee Area Type SG-2; (40 Minute Forced Entry) ¾" Nominal, glass clad polycarbonate, clear, American Society for Testing and Materials F-1915 Level 111, Global Security Glazing Secure-Tem +Poly SP-019 (basis of design) or equal. Product shall consist of a combination of heat or chemically strengthened glass out-board lites laminated to a polycarbonate core sufficient to meet the test requirements.

Finishes

- Finishes: All floors, walls, doors, and door and vision panel frames shall be coated with a high performance coating system to provide for corrosion resistance, vandal resistance, and ease of maintenance.
    - Metal Ceilings shall be factory finished with polyester powder-coated finish.

  - Concrete walls shall be coated with prime coat 1100 “Prime Guard” or equal, 3-coat 100% solids epoxy coating system for mar and abrasion resistance.
  - Ferrous and non-ferrous metals, except stainless steel, shall be painted with 2-part epoxy factory primer coating with a urethane top cost.
  - Floor Finish: All floors in central holding and courtroom holding cells and circulation areas shall be a broadcast epoxy coating system with a high wear urethane top coat, with integral cove wall base. Floors shall be impact and slip resistant.

- Joint Sealants: All gaps and joints greater than 1/16” between similar and dissimilar materials shall be sealed with security sealant. Pick proof 2-part epoxy (pecora “dyna-poxy” or equal) for all non-movement joints, and pick resistant (pecora “dyna-flex” or equal) at all movement joints.
- Exterior walls shall have a Distributed Antenna System (DAS) for hand-held radios and cell phone transmission and reception.

Circulation and Sightlines

- All secure circulation corridors shall be designed with clear obstruction-free sight lines for Court Officers who monitor all activity and movement. Glazing shall be used to enhance visual surveillance and access to natural light. Corridors shall be safe and secure and designed to minimize risk of violence, and suicide. Corridors shall be wide enough to safely accommodate staff escorting Detainees throughout the facility, minimum of 7’ wide. Ceilings in corridors shall be a minimum of 9’ high.
- Although CCTV may be used to monitor most areas, the design shall facilitate direct lines of sight in as many areas as possible to enable security staff to directly monitor and control activity and movement. Surveillance devices, especially CCTV, shall be strategically placed for optimal viewing and out of reach, and housed in tamper proof enclosures.
- Fixed furnishings and equipment shall be located to facilitate efficient traffic flow and ease of Court Officer support. Fixed seating and other amenities shall be designed to discourage tampering and prohibit detainees from hiding contraband.

Sally Ports and Movement Controls

- Sally ports shall be properly sized and doors shall be interlocked during normal operations, with manual override capabilities for simultaneous opening during emergencies.
- Sally ports shall facilitate controlled, secure, and expedited movement of authorized personnel and detainees.
- Male, female, adult and juvenile detainees require sight and sound separation and the design shall consider separate intake areas off the vehicular sally port to quickly segregate these populations. In addition, corridors shall be laid out to permit access from juvenile holding area to vertical transportation (stairs and detainee elevator) without passing the adult holding area, to facilitate sight and sound separation.

- Door openings at sally ports shall be equipped with door position switches (DPS), intercoms, cameras with automatic call-up, and latch position switches.

Vehicle Sally Port

- The vehicle sally port shall be on the same level as the central holding unit, if a basement is provided. There shall be no elevator or stairs required to transfer prisoners from sally port to central holding area.
- The secure vehicle sally port shall be designed to accommodate indoor prisoner transfer. sally port shall be sized to accommodate two large transport vans. Van dimensions are approximately 8' wide x 28' long at a minimum.
- Drive through type sally port ~~is preferred with~~ shall be Four-fold Door.
- Sally port floor level shall be one 6" step below occupied floor level of central holding area, to minimize vehicle exhaust intrusion into holding area, and ramped access must be provided to comply with American Disabilities Act (ADA) requirements.
- Vehicle gate shall be wired to emergency generator and shall be capable of both electrical and manual operation.
- Vehicle gate electrical controls shall be operated from key activated switches on both sides of each door and remotely from control room.
- Vehicle gate shall be equipped with electrical lockdowns at each bottom corner. Both lock-downs shall open when one is activated and both shall release during a delay period prior to the gate motor activating.
- Out swinging staff doors shall be provided to permit egress from the vehicle sally port with covered view ports operated from the inside.
- CCTV camera systems to monitor all doors and inside and outside of the sally port gates shall be provided.
- Electric interlocks between pedestrian doors, vehicle gates and lock up entry doors shall be provided.
- Required service infrastructure including lights, intercom, duress alarm, hose bib, floor drain, sump pump, manual door activators, electrical outlets and signal lights to indicate vehicle gate in full open position shall be accommodated.
- An area for two wall mounted, self-contained breathing apparatuses shall be provided.
- Carbon monoxide sensors with alarm and automatic exhaust shall be provided in sally port to notify staff of harmful build-up of CO fumes.
- Floor finish in sally port shall be high traffic epoxy floor system similar to Prime Coat "Prime Cast 2610".

Weapons Control

- Firearms are not permitted in the secure detainee holding area and must be secured in gun lockers in the detainee vehicular sally port by the transport officer. Wall-mounted gun lockers for twenty guns shall be located at the vehicular sally port and at the Security Office by the Lobby.

Control Room

The Control Room shall be centrally located with ease of access from the Central Holding Unit and Court Services portion of the Sheriff's Office. The Control Room shall be sized to accommodate 2 workstations with redundant controls of all electronic access and CCTV monitoring equipment.

The Control Room and equipment requirements shall include the following:

- Control booth shall be designed to allow electrical operation of all electronic systems and lockup doors by one person.
- Control panel shall contain all communication systems, alarm systems, lock systems, and security systems serving the secure areas of the building. All systems shall be completely integrated and displayed with indicator lights on an enhanced graphic orientation touch screen face plate; annunciator panel.
- The control booth panel shall be the master control for all electrical locks in the secure areas.
- The control panel shall have the ability to preclude the operation of any electrical lock individually or all locks simultaneously from the "local" key switch.

  Controls to be incorporated into the control panel shall include the following:

  - Electric controls for all Central Holding area or specific Control Room entry doors, vehicle sally port gates and doors, attorney interview doors and Central Holding Unit entry and exit doors. A door position switch light shall indicate each door status.
  - Intercom connections to the outside of all outer doors, the inside and outside of the vehicle sally port doors, attorney interview room entrances, elevators, and sally port vestibules.
  - CCTV monitors for all custody cameras, including cameras covering any corridors or areas not visible from the control room.
  - The lock(s) on the exterior control room door(s) shall be electrically controlled from a switch on the control room panel as well as from a digital keypad located outside and adjacent to the door.
    - Digital locks shall incorporate a card reader with keypad equivalent to "HID Proxpro" standards

- PA to and from all cells, rooms and open spaces
    - Switch to provide two-way communications between the control room and all open areas; also to provide floor audio monitoring of alarms and intercoms
    - All-call capability to all cells with capability to play taped announcements
    - System to be capable of addressing individual cells
- Audio monitoring system to all cells
- Volume adjustable
- Individual cell alarm to contain activation indication with LED light
- Adjustable audio-threshold level activation dial
- Key switch to control power to all controls, intercoms, PA and CCTV, locks, etc.
- Custody elevator annunciator and call down switch with ability to stop elevator at any floor
- Activation annunciation panel for all duress switches. Activation shall also activate respective CCTVs.
- Switches to disconnect all inmate accessible telephones

- A unisex staff bathroom with direct access shall be provided.
- A rear door exit to a non-custody area via double steel-doored sally port shall be provided.
- A lockable document pass-through controllable from inside of control booth, accessing the work area shall be provided.
    - Constructed of 10-gauge metal with horizontally swinging door with 1/4" metal stops.
    - A 12" x 1/4" letter slot pass-through
- All systems shall be powered by the emergency generator and uninterrupted power source (UPS) in case of power failure.
- A security glazed window system to surround the Control room affording direct visual observation of adjacent areas including corridors and deputy workstations shall be provided. Glazing shall be one way glazing to prevent visibility from detainee corridor into control room or through control room into adjacent sheriff office areas.
- The Control Room Counter shall be equipped with:

  - Sufficient space for controls and work spaces
  - Antenna connections
  - Telephone and data outlets
  - Outlets shall be equipped with UPS
  - With one dedicated phone line
  - Two telephones with two common lines each
  - One line to be dedicated and equipped for 911 power failure
  - Lockable storage space

- All CCTV, Access Controls, and Server Rack mounted equipment shall be located in a separate adequately air conditioned security electronics room. This can be accessed from the same sally port used to access the control room, but must have interlocked sally port access. This room is in addition to the security equipment room, which is primarily used for storage.

Central Holding Processing Counter Requirements and Equipment

- Central holding areas shall be designed to minimize foot traffic.
- Duress alarm buttons shall be located at convenient points within processing area.
  - Duress alarm buttons shall activate alarm annunciator in lockup control booth.
  - All alarm buttons shall be mushroom-shaped, red, at least 2” in diameter, surface mounted, and 48” above the floor for easy “Slap” activation.
    - Cleaning and storage closet shall be equipped with a lockable metal security door.
- Areas for air packs shall be provided with quantity and location to be coordinated with Sheriff Court Security Staff.
- A standing height (34” AFF) Solid Surface work counter shall be provided minimum 12’ long with adequate space for desk top monitors and equipment required for the detainee transfer process, and to accommodate 3-4 sheriff or Law enforcement transport staff.
- A floor drain shall be provided within the processing counter area.
- Sufficient electrical outlets shall be located in walls and at the work station to accommodate all proposed equipment and cleaning.
- One- full size commercial grade refrigerator for inmate lunches shall be provided, sized to accommodate 30-40 sack lunches, with adjacent solid surface counter top and kitchen sink with lockable storage above and below counter. Counter shall be 6’ long minimum.

- Search and processing benches
    - 2- 10’ stainless steel benches, to be permanently floor mounted away from and parallel walls shall be provided, with exact locations to be determined by Sheriff.
    - Benches shall have a permanently mounted, horizontal bar attached to bench, floor or wall for handcuffing prisoners.
    - Benches shall be located out of view of the attorney room and holding cells.

Interview Room Requirements and Equipment

- Entrance into the attorney side of the non-contact interview rooms shall be directly from the visitor waiting area, which shall be accessible from public circulation. There shall be a locked remote controlled door into waiting area, with two voice communications within the central holding area, and a locked remote-controlled access corridor that leads to the attorney side rooms.
- The detainee side of the non-contact interview rooms shall be accessed from secure circulation.
    - At least one room shall be wheelchair accessible from both sides.
    - Interview rooms shall not have pass-through capabilities. Pass-through capability is a safety risk and attorneys shall not be permitted to access prisoners alone. Any exchange of documents shall be facilitated by security officers after parties have been searched.
- Metal stools shall be permanently mounted on inmate side, movable padded guest chairs shall be provided on Attorney side by the County as movable FF&E.
- The attorney and prisoner portion of the interview booth shall be separated by a security wall, with secure construction from floor to underside of structure. Each conference room shall have a clear vision panel (detention grade hollow rated metal frame with grade 1 security glazing) from 30” AFF to 84” AFF, with a minimum of 42” in width. Window shall have a security grade speak-thru port in center of glazing at 44” AFF, a #12 stainless steel detention mesh opening from 32” to 40” AFF, or a telephone handset to facilitate voice communication from attorney to detainee side.
- Each side of attorney/prisoner interview booth shall be equipped with 14 gauge stainless steel writing shelf.
- Ceiling in detainee side shall be security grade perforated acoustic plank, while ceiling on attorney side shall be commercial grade acoustic ceiling tile.
- Door from detainee side to secure circulation shall have a vision panel to facilitate supervision from security officer, while masking sound and discouraging views from detainees in the rest of the facility.
- There shall be no CCTV monitoring of either side of the attorney visit room.

Cell Requirements and Equipment

- Holding Cells are comprised of single and group holding capacities that provide the following:
    - Proper seating for rated capacity, 18” bench space per inmate.
- Holding cells shall be grouped together by gender, and shall be organized around a vestibule connected to the main circulation corridor, so as to screen views from cell into main corridor, and provide sound separation from the male grouping of cells, and the female, and the juvenile male and juvenile female cells. The door to the main corridor from the cell vestibule shall be sound sealed, have a vision panel, and shall be equipped like a sally port door, keyed both sides, with DPS, LPS, Intercom both sides, no closer. All cameras monitoring cells can be located in the vestibule, provided they provide complete coverage of occupants in each holding cell (except toilet areas shall be shielded from view).
- Sliding type *Doors*, shall be detention grade hollow metal and glazing. Maximize glazing area to provide complete visibility into all areas of the holding cell.
- Swing Type Doors detention grade hollow metal and glazing. Maximize glazing area to provide complete visibility into all areas of the holding cell.
- Swinging Door Hardware
    - Door shall be equipped with electromechanical hardware remote controlled with DPS, Lock Position Switch, and a manual key override.
    - Sliding Door Hardware Gate operator shall be equivalent to “Folger Adam D2B” or “Southern Steel 3165PK" or approved equal.
    - Swing Door Hardware shall be "Southern Steel 10120" or "Brinks 5020 series" or equal, jamb mounted electromechanical locks with slam latches and 1” bolt throw. Locks shall be rated Grade 1 American Society for Testing and Materials F1450-97.
    - Sliding door Locking shall occur at the rear gate column.
    - All fasteners and removable access plates shall be on the staff side (corridor or control room) of the frame and glazing stops.
    - Swinging cell doors require detention grade hinges Southern Steel full mortise stainless steel institutional hinges with security stud and hospital tip, 204 FMSS or equal.
    - All cylinders shall be keyed using mogul key cylinders.
- Toilets
    - At least 1 male group, 1 female group, and one single occupancy cell shall contain an ADA compliant combination toilet unit.

  - Detention grade combination toilet, drinking fountain, wash sink, Acorn or similar quality.
  - All toilet areas shall be equipped with a 36" tall modesty panel, either masonry, cast concrete, or stainless steel. The panel must shield the toilet from view of the deputy viewing into cell from vestibule.
  - Computerized toilet flushing control with mechanisms housed in pipe chase.

- Blind spots or sharp edges are not allowed.
- Air supply and exhaust shall be provided for each cell, covered with detention grade grills affixed with tamper-proof fasteners.
- Sufficient detention grade lights shall be provided in cells and sally ports affixed with tamper-proof fasteners.
- Minimum cell ceiling heights shall be 9'.
- Cell seating shall be of solid concrete or baffled metal benches.
- Nothing shall be protruding from the walls or floors, other than combination toilet(s), modesty panel, and Benches.
- One hose bib shall be provided in corridor or vestibule for each cell grouping, in a recessed lockable cabinet at 18" AFF. At a minimum spaced no further apart than to permit coverage of all cell areas with a single 50 foot garden hose.
- Floor drains shall be adequately sized for complete cell wash.
- All cell floor drains shall be located in the corridor or vestibule area with security fasteners and secured grates.
- All cell floors shall slope to drain in corridor or vestibule.
- Provide security-grade television monitors with signal to lock up and control DVD systems.
- Each cell shall be equipped with a public address system to provide for communications to the cell interior from both the security vestibule and the lockup control booth console.
  - Local microphone shall be adjacent to outer sally port swinging door.
  - Provisions to maintain separation between various classes of prisoners through isolation or "keep away" cells.

5. SECURITY REQUIREMENTS

5.1 Security System General Requirements

General Performance Requirements

The purpose for the Section 5 Security Requirements are to establish guidelines and a basis for design of the integrated security systems. This section contains a brief overview of the security design philosophy, an explanation of requirements, and the various technologies that shall be used within the New Courthouse, Parking Structure, and throughout the Project Site.

The requirements listed within this section shall not be construed as exhaustive. The Project Company shall be responsible for providing all facets of the system equipment, infrastructure, programming, and all other services and materials needed to produce a complete and functional system. All equipment and materials provided shall be new and of the current generation, industry standard technology. Any components needed but not explicitly stated shall be provided as a part of this Project with no increase to the service fee or additional payment.

The following sections describe necessary functions of the security system. The Project Company shall provide all design, selection of equipment, layouts, and integration to meet both the prescriptive and performance requirements listed. The Project Company shall also provide adequate training to the County on the operation of each individual system and the operation of all integrated functions. In addition to live training sessions, pre-recorded training, covering the same material, shall be provided to the County for continued use on DVD, BluRay, or other industry standard file storage format.

All security hardware and electronic equipment installation shall be provided through a Detention Equipment Contractor (DEC). A DEC specializes in service, engineering, and installation of security equipment and is a member of American Correctional Association (ACA).

Security Systems Operations

Two key concepts shall be used to form the basis of the Security Systems design philosophy:

- Simple Operational Security
- Integrated Systems

Simple Operational Security requires focus on providing the best and appropriate level of security in a manner which is easy for the users to operate. Security Systems provided shall employ features to make user interaction simple and friendly and to streamline and automate processes in a secure and efficient manner.

Integrated Systems requires interconnection between systems which are more traditionally independent. Security subsystems shall be integrated into one integrated security system to allow security personnel to efficiently monitor and control all aspects of the building security. This shall allow for higher situational awareness for better response to potential and active situations.

Levels of Security

Security shall be divided into five levels to establish requirements for construction, finishes, furnishing, hardware, and security requirements. The five levels shall be as follows:

- Level 4: Secure-Maximum
- Level 3: Secure-Restricted
- Level 2: Secure-Public
- Level 1: Sterile Public
- Level 0: Unscreened Public

Level 4: Secure-Maximum shall be employed in areas used for detention and holding. These areas include detainee intake, processing, holding, movement corridors, and elevators. Entrance into Level 4 areas shall be through secure sally ports or vestibules consisting of two or more sets of doors or gates. These doors and gates shall be interlocked such that only one can be opened or operated at a time. All holding cells and movement doors in this area shall consist of electrified locks controlled by the Center Control with both the door position and lock latch being monitored. Access through these controlled doors shall require intercom stations for communication to Center Control and Video Surveillance System (VSS) cameras to provide video identification before unlocking critical doors.

Level 3: Secure-Restricted areas shall be spaces within the courthouse used by the judicial staff including secure corridors, elevators, and staff spaces/suites. The Access Control System shall control entrance into Level 3 areas through electrified locks or strikes. Access through these doors shall be provided through the use of proximity type card readers. In specific cases, the doors shall be controlled remotely through a push button/switch or Access Control station. The judicial entrance shall be controlled through secured doors that shall have card access with VSS camera and intercom monitoring.

Level 2: Secure-Public spaces shall include areas utilized by non-staff occupants, such as conference rooms used by attorneys and clients. Access to Level 2 areas shall be controlled utilizing key locks to restricted spaces or escorts. In specific cases, the space shall be protected with card reader controlled electric strikes with access granted by escort personnel.

Level 1: Sterile Public areas shall refer to all spaces within the security perimeter which are accessible to screened public during Operating Hours. Access to Level 1 areas shall be through the screening area in the entrance. Screened staff or visitors exiting from the facility shall be separated from unscreened people entering the facility through the use of either physical barriers or separate entrance/exit doors. Sterile persons shall not have physical contact with non-screened people until they are back into the Level 0 area where they would then need to be re-screened. This prevents the possibility of a sterile individual accepting any items for pass back into the secured areas and also prevents ingress of unscreened people into secure areas. There shall be a vestibule entering the screening area which can be used as a man trap in an emergency situation.

Level 0: Unscreened Public spaces shall be any area outside of the secure perimeter which are accessible to the public during Operating Hours. Access to Level 0 areas shall be unrestricted to the public during normal Operating Hours, and the area shall be monitored. The doors may include key locks. The main entrance may include electrified locks accessed via card reader to the Access Control System for after hours, weekend, and holiday entrance for selected personnel. All public entrances to the building shall be protected with ballistic assembly (minimum level 2).

The level of security provided shall be maintained throughout the entire area deemed to meet the requirements for that level. Portals such as doors, gates, and vestibules used to transition from one security level to another shall meet the requirements of the higher of the two levels. All areas of the facility where staff interface directly (either face-to-face or through a window) with the public shall be provided with duress alarms.

Security Sub-systems

The sub-systems which shall be interconnected ~~to~~ for the overall security system shall include the following:

- Intercom and Paging System
- Access Control and Monitoring System
- Video Surveillance System
- Detention Controls and Monitoring System
- Security Monitoring and Control System

All security sub-systems shall be protected by UPS and emergency generator back up. Equipment rooms containing all security systems equipment shall be provided with dedicated cooling systems to regulate the temperature and air quality.

Security systems utilizing IP based communications shall be provided with dedicated structured cabling and switching equipment. The security network shall be logically and physically separated from data and communications networks. Security network cabling shall be identifiable by dedicated cable jacket colors. Coordinate with County/State requirements for cable coloring. All copper security network cabling shall be Category 6 UTP.

Intercom and Paging System

Facility communications shall be accomplished through the use of telephones, intercom and paging systems. A dedicated security intercom system shall be connected to all electronically controlled doors and report back to monitoring Courthouse/Sheriff's Office Control center for the general building doors. In addition, intercom stations installed on electronically controlled doors leading into the judge's chambers secure corridors are recommended to have dedicated security intercom master stations reporting back to the judge's secretary. The systems shall be designed as simple to operate due to the relatively low number of stations involved. The Detention/Holding Cells Control Center intercom substations shall interface only with detention holding cells, sally port, intake, and processing areas. Provide a "push to talk" intercom system, installed at these controlled doors and other strategic locations.

Video intercom stations shall be provided in select locations such as the entrance to judges' chambers. Answering shall be tied to a local computer within the controlled space, but a tie in to the main system shall be provided. Provide additional VSS monitoring around video intercom substations and provide call up on the computer when the intercom is activated. Provide coverage such that the individual requesting entrance can be confirmed to be alone or that additional visitors are verified before entrance is granted.

Provide zoned paging throughout the facility. Paging capability shall be provided through intercom master stations with the ability to page selected zones or all-call. Coordinate paging zones and zone/all-call master station rights with the County and State.

Access Control and Monitoring System

The facility shall be designed to limit and control the amount of entry/exit points for security purposes. Security barriers (i.e. security vestibules and doors) shall be designed to control and provide secure access to the facility for authorized personnel in an expedient manner. Designated doors shall be operated with card reader devices. Designated doors shall be equipped with Door Position Switches (DPS) to indicate door position and lock status on the control screen.

Secure vestibule doors shall be interlocked but capable of override for simultaneous opening during emergencies.

The holding area shall be controlled by a PLC based access system and shall operate independently of the card access system. This system shall consist of Central Processor Unit (CPU), power supplies, Input/Output (I/O) modules for interfacing door control elements, CCTV, intercom stations, motion detectors, touch screens, and status indicators. Ethernet communications protocol on a secure network shall be used to interface the various systems.

Building Access - Exterior

Provide Metal Detector/X-Ray screening stations for officers to screen visitors to the facility in the lobby.

Judges shall enter the facility through a dedicated entry via card access. Card reader devices allow justices to enter the selected areas of the facility without Sheriff's Office intervention. The card access system shall provide for computerized records of the time and user identification for each designated door.

The restricted vehicle sally ports shall be monitored and controlled by the Sheriff's Office.

Touch pads and key less entry ~~for selected locks~~ shall be employed. ~~For selected locks,~~ biometric entry shall be utilized.

All exterior doors shall have door position switches for monitoring. Emergency egress doors that are not to be used for normal exiting shall be equipped with door alarms. Emergency egress and delayed egress doors shall alarm locally and at the control workstations. All secured exterior doors shall alarm if propped open.

Building Access - Interior

All entries into Restricted (Judicial/Staff Personnel) areas shall be controlled. Staff corridors, suites and shared areas shall be accessible via card access. Judicial and Staff personnel shall be provided metal keys for private office and other designated staff spaces within suites. Provide remote entry push-button devices and VSS/intercom identification for staff to control public access to staff suites.

All entries into restricted areas are controlled. Access from the vehicular sally port through to the secure waiting/staging area is facilitated via interlocked doors that are controlled from Center Control with notification monitoring via intercom and VSS communication.

Public Parking Structure

Provide a safe parking structure through access control, emergency phone placement, and surveillance coverage. Ingress and egress to the parking structure is controlled through the use of lift arms and a control booth. One direction tire spikes are used on the exit side to prevent reverse entry. Vehicle loop detectors and Passive Infrared (PIR) detectors are used to prevent piggybacking and accidental closures on vehicles traversing the barrier.

Emergency phones are necessary in public parking locations of this nature. The phone stations are bright in color and have a static or flashing light to mark their presence. The phones connect directly to central control from where the Sheriff's Office or other emergency services can be dispatched. An added feature on some emergency phones is a loudspeaker that can be used for paging and announcements.

VSS cameras shall be used to monitor the movement throughout the parking structure as well as the vehicle and pedestrian portals. Additionally, provide dedicated coverage of all emergency phone locations.

Secure Parking

Provide a secure parking area sufficient for Judicial and Sheriff's Office use. Provide video surveillance coverage, emergency phones, and access controlled entrance and exit. Provide access control through dual height pedestals equipped with card readers, intercoms, and VSS cameras. Provide one direction tire spikes on the exit lanes.

Access Control Monitoring Workstation

Access control monitoring shall be provided through a touch screen workstation. Controls shall be GUI based, displaying a graphical map of the area of jurisdiction. The GUI shall include graphical indication of the door status and control of all car reader controlled doors.

Intrusion Alarm

An intrusion alarm system shall be provided for after hours monitoring of all areas within the court house which are not 24/7 operation. The alarm system shall consist of glass break sensors for all rooms/areas with first floor windows, window position monitoring for all operable first floor windows, and motion detection at entrances and secure storage rooms such as the armory, property storage, evidence storage, etc.

The system shall alarm in local control rooms and additionally shall be capable of remote monitoring by the police department and local emergency operations center.

Video Surveillance System

VSS cameras shall operate on a secondary level in conjunction with visual and audio communication devices. Video surveillance shall be employed to electronically display and record areas that are particularly strategic, unobservable, or sensitive. Provide VSS cameras, placed to capture videos of specific areas with intercom and access control (building exterior, parking areas and various entry/exit points).

The VSS shall be Internet Protocol (IP) based for network video recording and viewing and virtual switching.

Video monitoring and recording systems provided for this project shall be selected from the most reliable digital systems available. System design shall focus on meeting coverage, reliability and value requirements of the County/State. Only systems with proven quality of equipment and service, and which have national distribution shall be provided to ensure long-term maintainability in a cost-effective way. All VSS equipment must be from one manufacturer.

The video surveillance system shall be connected to remote monitoring by the police department and local emergency operations center.

VSS Cameras

VSS cameras shall be designed to use the ambient lighting provided by the building design, not dictate it. Today's market provides cameras with a large range of light sensitivities (lux ratings). The VSS equipment shall integrate and operate within the County/State's space, unobtrusively, without requiring special modifications to the space.

The system shall be designed with a combination of fixed and PTZ cameras. All cameras shall record in color and be enclosed in appropriate impact and/or vandal resistant dome housing. In addition to other locations directly referenced for coverage, all public areas within the new courthouse shall be provided with complete camera coverage.

Fixed Cameras

Fixed focus VSS cameras shall be wall or ceiling mounted and aimed at locations as specified. Provide fixed cameras mounted at entrances/exits, screening stations, emergency doors, storage areas, elevators, locations of duress alarms, etc. to allow for focused monitoring of people accessing these areas.

PTZ Cameras

PTZ cameras shall be used for large surveillance areas and be programmed for preset tours and default positions (In a preset tour mode, the camera is programmed to automatically move at specified times to provide coverage to various areas within its viewing area). The operator shall have the ability to manually operate all PTZ cameras, with the camera returning to the tour or preset default when finished. The operator, utilizing a joystick, can rotate the camera 360 degrees and utilize the controls to zoom in or out on a specific subject.

PTZ cameras provide for multi-area coverage and are useful in areas where constant monitoring of an event is not warranted, and monitoring the area with fixed cameras is cost prohibitive.

Camera Monitoring

VSS monitoring stations shall be provided at all control and monitoring points. Video monitoring shall be provided on a permissions based system where the operator is only allowed to view cameras within their jurisdiction.

Typical monitoring stations shall employ a video workstation with keyboard and mouse control and a single 27" or greater display. Detention control and Security control centers shall be provided with the same workstation as typical monitoring workstations. In addition, these locations shall be provided with multiplexed overhead monitors. Coordinate with County requirements for quantity of overhead monitors and number of views per monitor. Sufficient workstations shall be provided to display the multiplexed video at full frame rate and resolution.

Off-site monitoring of the VSS cameras shall be provided for display at the County 911 center.

Detention Controls and Monitoring System

Crime deterrence and security is achieved through the execution of a well-developed plan. Proper control and coordination of the security systems, people, and procedures is critical to the maintenance of the original designed security level.

The control and monitoring stations serve as the communications and security centers for the facility. They are responsible for monitoring and controlling building communications, safety, security systems, and entry and exit points. The control room shall have primary control of all detainee movements, the vehicular sally port, holding cells, and secure corridors. The Control Room shall be a secured, fixed post with 24 hours a day, 7 days a week operation. As the nerve center of the facility access and control, its location in the building layout and room equipment arrangement are two essential criteria in the design consideration.

Access to the Control Room shall be limited and controlled by the Control Room itself. Central Control shall be highly secure and inaccessible to the unauthorized population at all times. The area shall be within its own security envelope; this means that the floors, walls, windows and ceiling must be secure. One-way vision glazing is highly recommended.

Ergonomic design criteria shall be a major part of the control room equipment layout. The control panels and equipment shall be strategically positioned so that console operators can easily operate the controls and observe all ceiling/wall mounted VSS monitors. The Control Room environment shall reduce stress and fatigue, as well as enhance the staff member's efficiency. Provide operator-friendly equipment component layout to improve reaction time and reduce fatigue of individuals utilizing equipment and machine.

Courthouse Control Room

This monitoring and control station shall be in charge of the ~~facility~~ daily security operations. Provide the control console with display, control, and recording of the electronic systems. The console shall be ergonomically designed to perform the required functions efficiently and effectively.

This entire system shall consist of the Access Control Monitoring Computer with Graphical User Interface (GUI) for all areas of jurisdiction and also include CCTV monitoring/control, intercom and paging/control and Duress switch monitoring. It shall also monitor after hour intrusion detection sensors (glass break, motion detection, etc.). The court house control room shall be capable of acting as a backup to the detention control room in the event that the detention control room is overtaken.

Secure Parking Gate Control

Provide electrically controlled gates at the Judge's Secure Parking area. There shall be a dual height pedestal with card access, intercom station, and built in CCTV camera for verification. Egress control shall consist of egress pedestal with card reader/intercom.

Provide control gates for any driveway leading to the service areas. An intercom shall be placed here along with CCTV cameras to positively verify the identity of the service personnel prior to providing access.

Vehicle Sally Port Gate Control

Provide electrically controlled gates at the Secure Vehicle sally port. There shall be a dual height pedestal with card access, intercom station, and built in VSS camera for verification. Egress control shall consist of egress pedestal with card reader, intercom, and VSS camera.

Lobby Screening

Provide space and equipment for security screening at all entrances before entering the public circulation and waiting area of the courthouse. The public circulation also provides space for courtroom waiting and access to the Clerk and other agency services. The public lobby of the courthouse shall provide a distinctive security boundary for the facility, separating public from staff and secure areas. These areas shall be provided with duress alarms and dedicated video coverage.

Mail Room Screening

Provide screening equipment for incoming mail including a magnetometer, and portable screening equipment for detecting dangerous contaminants - including explosives, narcotics, chemical and biological warfare agents, and toxic chemicals.

Security Requirements by Space

Space Code	Code Description	VSS Camera	VSS Monitor	Duress Alarm	Intercom Substation	Intercom Master Station	Door Position Monitoring	Card Reader Door Control	Access Control Workstation	Detention Door Control	Detention Control Workstation
BS1	Lobby Entrance Queuing	■			■		■	■			
BS2	Lobby Security Screening	■		■							
BS3	Entrance Lobby	■					■				
BS4	Janitor's Closet										
BS5	Telecom Closet						■				
BS6	Electrical Closet						■				
BS7	Security Closet		■				■	■	■		
BS8	Maintenance Shop/ Storage						■	■			
BS9	Loading/Receiving	■			■		■	■			
BS10	Trash Room and Recycling	■					■	■			
BS11	Recycling						■	■			
BS12	Serving Line	■	■	■	■	■	■	■	■	■	■
BS13	Prep Kitchen	■	■	■	■	■	■	■	■	■	■
BS14	Kitchen	■	■	■	■	■	■	■	■	■	■
CF1	Conference Room, Public Access	■									
CF2	Conference Room, Staff Access						■	■			
CF3	Conference Room, Public and Staff Access	■		■			■	■			
CF4	Judicial Conference Room			■							
CF5	Jury Deliberation Room			■							
CF6	Conference/Training Room						■	■			
CF7	Muster Room	■					■	■			

Space Code	Code Description	VSS Camera	VSS Monitor	Duress Alarm	Intercom Substation	Intercom Master Station	Door Position Monitoring	Card Reader Door Control	Access Control Workstation	Detention Door Control	Detention Control Workstation
CN1	Counter Station - Open	■	■	■		■			■		
CN2	Counter Station - Glass Partition	■	■	■		■			■		
HO1	Holding Cell, Wet	■					■			■	
HR1	Standard Courtroom	■		■			■	■			
HR2	Hearing Room, No Jury	■		■			■	■			
HR3	Orphans Court	■		■			■	■			
HR4	Grand Jury Hearing Room			■							
JA1	Jury Assembly Waiting Room	■		■							
JA2	Jury Lounge	■		■							
LB1	Circulation Desk	■		■							
LB2	Library Computer Kiosk	■									
LB3	Library Work Tables/ Carrels	■									
LB4	Listening Station	■									
LB5	Library Copier	■									
LB6	Library Files	■									
MA1	Mail Room	■		■			■	■			
MA2	Mail Processing Area, Open	■		■			■	■			
OF1	Standard Office			■			■	■			
OF2	Large Office, Non-Judicial	■		■			■	■			
OF3	Complete/Satellite Office										
OF4	Judicial Office			■		■	■	■			
OF5	Robing Room			■							
OS1	Copier/Supplies Storage, Open Area										
OS2	Copier/Printer/Storage Room										

Space Code	Code Description	VSS Camera	VSS Monitor	Duress Alarm	Intercom Substation	Intercom Master Station	Door Position Monitoring	Card Reader Door Control	Access Control Workstation	Detention Door Control	Detention Control Workstation
OS3	Open File Area, Storage Cabinet										
OT1	Marriage Ceremony Space	■									
OT2	Attorney Lounge	■									
OT3	Vending Area	■									
OT4	Wellness Room						■	■			
OT5	Library (State's Attorney)										
OT6	Security Station/Post		■	■		■			■		
OT7	Media Room	■									
SF1	Vehicular Sally Port	■			■		■			■	
SF2	Security Office/ Command Room		■	■	■	■	■		■	■	■
SF3	Animal Holding				■		■			■	
SF4	Control Room		■	■	■	■	■		■	■	■
SF5	Prisoner Processing Counter	■		■	■		■			■	
SF6	Property Storage	■			■		■	■*		■	
SF7	Search Alcove	■			■		■			■	
SF8	Prisoner Lunch Storage				■		■			■	
SF9	Visitation Booth	■			■		■			■	
SS1	Break Room						■	■			
SS2	Kitchenette, Alcove/ Open										
SS3	Staff Lockers, Room						■	■			
SS4	Fitness Room						■	■			
ST1	Courtroom Storage						■	■			
ST2	Large Walk-in Storage, in Office Area										
ST3	Coat Closet										
ST4	Fireproof Storage										

Space Code	Code Description	VSS Camera	VSS Monitor	Duress Alarm	Intercom Substation	Intercom Master Station	Door Position Monitoring	Card Reader Door Control	Access Control Workstation	Detention Door Control	Detention Control Workstation
ST5	Secure Storage (Armory, Secure Equip.)	■	■	■	■	■	■	■*	■	■	■
ST6	Storage Room, Building Support	■	■	■	■	■	■	■	■	■	■
ST7	Bulk/Housekeeping Storage						■	■			
TC1	AV Closet						■	■			
TC2	Server Room/Closet		■				■	■	■		
TC3	Server Rack - Open Area						■	■			
TC4	Work Bench Area										
TO1	Public Toilet Room										
TO2	Staff Toilet, Building Support										
TO3	Toilet/Shower Room	■					■	■			
WA1	Courtroom Waiting Area, Open	■									
WA2	Judicial Waiting Area	■			■		■	■			
WA3	Office Waiting Area, Open	■									
WA4	Children's Play Area	■									
WA5	Visitor Waiting Area - Central Holding	■					■	■			
WA6	Victim/Witness Waiting, Closed Room	■					■	■			
WS1	Open Workstation with Partitions/Cubicle						■	■			
WS2	Open Workstation, No Partitions						■	■			
VS1	Courtroom/Hearing Room Vestibule	■									
VS2	Jury Deliberation Vestibule										

Space Code	Code Description	VSS Camera	VSS Monitor	Duress Alarm	Intercom Substation	Intercom Master Station	Door Position Monitoring	Card Reader Door Control	Access Control Workstation	Detention Door Control	Detention Control Workstation
VS3	Secure Vestibule/ Sound Lock, Secure	■			■		■	■			
VS4	Secure Vestibule, Pedestrian Sally Port	■			■		■			■	
VS5	Weather Vestibule	■			■		■	■			

*This location shall be provided with a card reader with integral biometric or keypad for multi-factor identification.

Security System Commissioning Requirements

Commissioning testing shall be performed following submitted and approved test procedures, beginning with field devices and sub-systems and then head-end equipment. The testing shall include all systems, all individual equipment for each function, all system configurations available, and a visual inspection of installation for damage and labeling, of all inputs, outputs and functions. Following the commissioning testing and any repairs or corrective measures taken to meet the functional requirements, test results shall be submitted to the County/State for record.

Commissioning testing shall ensure that all functional and integration requirements are met for the following Systems:

- Touch Screen Control Stations
- Control Systems (Integration with all security sub-systems for alarm annunciation and response)
- Access Control (Integration with Control system for Door Release)
- VSS System (Integration with Control Systems for camera call-up upon alarm, integration with Intercom system for video-follow-audio)
- Intercom and paging System (Integration with Control/CCTV system for video-follow-audio)
- Duress Alarm System (Integration with Control system for alarm annunciation, integration with in-building radio for transmission of duress signals)

5.2 Intercom and Paging System

Description of Work

- Provide a Security Intercom System (SIS) for the new Courthouse. The SIS integration shall include video and duplex voice communication between the intercom stations to master intercom stations.
- The Intercom System shall be an IP type system interfaced to the Security Network including ACS, VSS, and Detention Control System.
- Acceptable systems integration shall include Access Control System and Video Surveillance system interfacing required for implementation of signaling and controls and call up of any cameras associated with the intercom station making the call.
- The SIS shall include multiple voice/video channels/paths as required for simultaneous operation of all master intercom units provided under this contract, in conjunction with each locally controlled area and required site wide security intercom communication specified.
- Video Intercom stations shall be provided to control door access throughout the facility and shall be controlled by the master stations.
- The system shall allow for Video Intercom software installed on the County/State's computer to provide an alternate means of answering intercom calls. The Project Company shall provide and install all soft masters requested by the County/State.
- The work provided by the Project Company shall include the following:
    - All Intercom and Paging components, including cabling, interfacing, connections and programming for the multiple master intercom.
    - All intercom and components, speakers, horns, and cabling for all control stations.
    - The headend and control system shall be expandable.
- Provide coordination with other trades and Project Company for infrastructure requirements and as required for a complete, functional and trouble-free Intercom and Paging System.
- Provide weatherproof intercom sub-stations mounted in a dual height pedestal located at the vehicle entry gates.
- Provide weatherproof intercom substations at all exterior locations.

- Coordinate cabling, system components and their arrangements electrically and mechanically.
- Provide interface to the Access Control, Detention Control, and Video Surveillance Systems.
- Provide line fault indication for all circuits.
- Intercom System shall conform to the following:
    - Intercom: The Intercom System shall be interfaced with the Access and Detention Control System to allow the Security Office operators to communicate directly through the Graphical User Interface (GUI) Screens and mouse control screens, to substations located throughout the courthouse. Intercom Stations shall be hands-free operation from the remote call-in stations, push-to-talk at control stations, stainless steel construction, and flush mounted.
    - The system shall include the following functions:
        - Door control intercom
        - Reception intercom
        - Administrative intercom
        - Intercom station audio monitoring
        - Output and event response control
    - The system shall integrate with the following other security and communication systems to form a comprehensive facility management network:
        - Access Control system
        - GUI/mouse mode control system
        - Video Surveillance system
        - Detention Control system
    - Project Company shall coordinate with County/State to determine operating hours of the Security Office.

System Operation

- Intercom master station general operation
    - Display to provide alphanumeric descriptions of functions, station and device names, and current activity. Function key labeling to change depending on the location within the menu structure or options available to the operator.
    - Master station to display, in a defined area, the current number of calls in the queue, number of acknowledged calls, and number of stations removed from service or monitor points in bypass mode.
    - Master stations, through their command functions, to have the ability to:
        - Answer calls
        - Place calls
        - Place calls on hold
        - Transfer calls to another master station
        - Place conference calls
        - Place group calls
        - Monitor intercom stations
        - Independently adjust each station's volume level
        - Remove stations from service
        - Recall the last station with a single control
        - Adjust display back lighting
        - Select 12 or 24-hour clock display
        - Adjust the step rate for switching between monitored stations
    - Provide volume adjustment of master station and intercom levels that shall be controllable during communications. Each station's volume level shall be independently software controlled. Level settings shall remain in effect until modified by a future adjustment.

- Master stations shall include the ability to be placed in an unmanned mode which automatically routes all of the associated call handling functions to a pre-defined secondary master station.

- Call Placement from an Intercom Station
  - Depressing an intercom station's call push-button shall place a call request in the queue of the master station or stations assigned to receive that station's calls. Calls shall be queued in order of priority level associated with the intercom station and time the call was placed.
  - Master station shall normally display the identity of the top three calls in its call request queue. Call identity shall include the device ID number and/or an alphanumeric descriptor. Descriptor shall be up to 20 characters.
  - The master station display shall indicate the total number of calls currently in its queue. Scroll keys shall enable the master station to view all calls in the queue.
  - Calls not answered within a pre-programmed time shall place a secondary call request to an assigned master station.

- Call Answering at an Intercom Master Station shall provide for the following:
  - Intercom master stations shall be able to answer the top call request in its queue by depressing the 'Next' function key. At the completion of the call, the 'End' function key shall close the communication link and remove the call from the queue.
  - Subsequent calls may be similarly handled for the remaining calls in the queue.
  - Queued calls may be answered out of sequence by scrolling through the queue to the desired call. The selected call to flash on the display and shall be answered by depressing the 'Enter' key. 'End' key shall close the communication link, remove the call from the queue, and return the master station display to the top of the queue.
  - A call that is currently connected to a master station shall display that the call is connected, the type of device connected, and the identity of the connected device.

- Voice Communication shall provide for the following:
  - Telephone handset voice communication between intercom master stations shall be full duplex.

  - Open voice communications between intercom master stations shall be automatically switched half duplex with press-to-talk override.
  - Voice communications between intercom master stations and intercom stations shall full duplex.
- Station Monitoring shall provide for the following:
  - Master stations shall be able to monitor an individual intercom station or a pre-defined group of intercom stations.
  - System shall permit establishing as many station monitor groups as there are unused station ID numbers.
  - Each master station shall individually control the rate at which stations in the monitor group are sequenced through.
- Video intercoms shall meet the following requirements:
  - Voice Video integration
  - Video display on video intercom master station
  - Access control door release
  - Video from intercom cameras shall be accessible through VSS
- Parking Area access station shall meet the following requirements:
  - Provide independent two way communication between the access control gate and the assigned security station.
  - Provide a push button call activation and response between the access control gate and the assigned security station.
  - Provide an audible call signal from the access control gate to the parking attendant station.

Functional Requirements

- Identification numbers for each category of device, group, zone, etc. shall range from 1 to 65, ~~535~~.
- Alphanumeric description for each device, group, zone, etc. shall contain up to 20 characters and spaces.

- All intercom station field wiring shall be supervised for short circuit and open circuit faults.
- All system boards shall include self-diagnostic functions for complete operational and communication testing.
- All system boards and devices shall be able to be inserted or removed from service while the system is fully operational. Other system activity not directly related to the board insertion or removal to not be affected.
- System diagnostics shall include the ability to test system communications and devices from the service, administration, and control computer.
- System shall include the ability to make on-line changes to the system configuration.
- System shall include logging functions for system activity and system maintenance.
- System shall include the ability to print, through an optional printer, activity and maintenance logs.
- On-line factory support shall be available through a modem connection to the service, administration and control computer.

Performance Requirements

- System frequency response: 300 to 3,500 Hz.
- Intercom station output: 82 dB SPL at 3' with 82 dB SPL input at face of transmitting station.
- Maximum time from call placement to annunciation at intercom master station: 1.0 second.
- Maximum time to complete call connection upon receipt of command from intercom master station: 1.0 second.
- All system equipment to comply with the radiation limits for Class A digital devices of FCC Rules Part 15, Subpart B.

Electrical Power Requirements

- Provide all power as required. Coordinate all power and infrastructure requirements with the Electrical requirements.

Qualifications

- ~~Installer~~ Project Company shall be qualified and certified by the manufacturer prior to installation and programming.

Quality Control

- Intercom System components shall meet the requirements of all applicable codes and standards. All equipment shall be of maximum-security correctional grade.
- The ~~Installer~~ Project Company shall strictly adhere to the installation instructions provided by the system manufacturer and shall provide certification reports from the manufacturer's Representative that all installation instructions have been satisfactorily complied with.
- All equipment shall be Underwriters Laboratory/CSA listed.

Reliability

- Provide Intercom and Paging System with mean time before/between failure (MTBF) of minimum 36,000 hours.

~~Products~~

Un-interruptible Power Supple (UPS)

- Coordinate with Electrical requirements for UPS supplied power for all security systems.

Components

- Intercom central exchange
  - Provide facility paging exchanges, hands-free type master stations, substations service, administration and control (SAC) computer, and card cages as required.
  - The following specifications of the intercom and paging system apply to all system components provided.
  - Provide all control, switching logic, signaling and operating features listed in this specification.
  - All circuits shall be located on printed circuit boards which slide in to the central exchange mainframe and/or I/O card cages.

- The central exchange shall be configured to provide the following capabilities:
  - Programming from security electronics room and central control center master stations, battery-backed protection of user program, multiple answer codes, alarm call, all call, priority call, group call, auto callback, conference call, restricted access, external speaker page, audio monitoring, stations and minimum 25 voice channels as required.
- Provide wall mounting hardware, printed circuit boards and modules as required for specified system functions.

- Central exchange equipment
  - Voltage regulation circuit board, transformers, subscriber cables, subscriber (i.e. Station) circuit boards, voice channel circuit boards, processor circuit boards, optional feature circuit boards (all call, group call, alarm call, etc.), logic circuit boards, interface boards and all accessories shall be as required to provide the capabilities described in these specifications. Provide terminal boards, wiring accessories and all appurtenances required for a fully functional and trouble-free system.
  - The intercom and paging system provided under this contract shall include all hardware and software required for hands-free conference mode operation of selected groups of master stations and substations specified by the County/State.
  - Provide number of simultaneous talk paths/trunks/buses as required to meet project demands.

- System administration and control computer
  - The service, administration and control (SAC) computer shall provide the processing for the system's operation, configuration functions, and maintenance functions.
  - Interface to the Input/Output (I/O) card cages, master stations, and remote intelligent devices shall use Ethernet port connections.
  - Interface to the PLC door control system shall be an industry standard rs-232 or Ethernet addressable connections.
  - SAC computer shall support the ability to be upgraded to a redundant configuration by adding a second SAC computer and interface cards. No existing equipment to be obsolesced by redundancy upgrade.

- SAC computer shall meet the requirements ~~of the workstation computers specified in section 284000 with the addition~~ of the following:
  - Real time operating system
  - Communications system software
  - PCLTA Cards with:
    - Lonworks direct connect ports as required or
    - Lonworks free topology ports as required or
    - Ethernet IP ports

- Input/Output (I/O) Card Cages
  - I/O card cages shall supply power distribution network connection and digital audio bus connections for the system control and audio I/O boards. Units shall support redundant card configuration and the ability to be interconnected for system expansion.
  - I/O card cages shall be designed to facilitate the insertion and removal of cards while the system is in operation. Units shall incorporate fused power input connections to protect cards.
  - I/O card cages shall be designed for mounting in 9U space of standard 19" equipment racks and to meet EMI radiation and susceptibility standards.
  - Card cage power supply, network and control terminals shall be screw type with positive clamping pressure plate providing locking tension.
  - Backplane of each card cage shall have the capacity for routing 512 simultaneous audio channels for communication and program routing.
  - Cards shall be secured in place with front panel screws. Each card rear plate shall include securing screws to eliminated stress on connectors. All card field wiring shall be made via quick disconnect connectors on rear of card.
  - Card cage shall provide capacity for one (1) control card and 16 I/O cards without redundancy and two (2) control cards and 15 I/O cards in a redundant configuration.
  - All unused card slots shall be provided with front and rear blank panels.

- All control and I/O cards shall be supplied with factory-manufactured cables for interface to field wiring terminal blocks.

- Power Supplies
  - Each I/O card cage shall be provided with an associated external power supply designed for mounting in 3u space of standard 19" equipment racks.
  - Input source to 100-120 VAC, 10 a maximum. Outputs shall be capable of providing up to 30 A at ± 12 VDC. Voltage regulation ± 10%. Maximum ripple 1% peak to peak.
  - Units shall include independent dual supplies, front panel power switch and line power indicator, and independent supply status indicators. AC line input shall be fused and protection circuitry shall be provided for overload and over voltage conditions.
  - Power supplies shall incorporate rear mounted fan and filter assembly and ventilation slots in the front and side panels.

- Audio Control Boards
  - Audio control boards (ACB's) shall mount in I/O card cages and provide the digital audio switching and processing functions for the audio I/O cards. ACB's shall also provide card cage link connections for system expansion and copper digital trunk interface to remote card cages and exchanges.
  - On board digital signal processors (DSP) shall control voice channel signal processing, conference calls, station monitoring and to generate signal tones. Units shall be provided with one (1) main board DSP module and one daughter board with two (2) DSP expansion module.
  - Units shall include full functional test capabilities with self-test that can be operated from the SAC computer. Indicators shall be provided for network status and operating status. Front panel pushbuttons shall provide control for master reset, card reset, and service functions. Internal fuse shall protect circuitry.
  - ACB's shall incorporate flash memory for updating of the Central Processing Unit (CPU) and DSP firmware over the network.

- Station Audio Boards
    - Station audio boards (SAB's) shall mount in I/O card cage, or remote receiver units, and provide the system interface for intercom stations and for master station audio. Units shall convert incoming audio signals to digital format and outgoing signals to analog format. Each channel shall monitor the status of up to two (2) switches associated with each intercom station.
    - Station audio boards shall each incorporate 15 half-duplex channels and one full duplex (master station) channel. Additional master stations shall be connected to adjacent pairs of half duplex channels. Each channel shall include a separate audio power amplifier for non-blocking call operation and eight (8) independent software controlled volume settings.
    - All station audio, switch, and power functions shall be transmitted over a single shielded pair cable. Station to card cabling with 22 gauge conductors shall extend up to 2460 ft. Wiring supervision shall detect open circuit and short circuit faults.
    - Front panel LED's shall indicate operating status. Units shall support redundant operation.
- Audio Input and Output Boards
    - Audio input and output boards shall mount in I/O card cage, or remote receiver units, and provide the system interface for up to eight (8) system audio inputs or outputs. Units shall convert incoming analog audio signals to digital format and outgoing digital signals to analog format.
    - Input or output signal compatibility shall be provided from microphone level to line level signals. Each channel shall be software-selectable for level range and trim level. Each input channel shall be balanced and provided with input control and status output signal. Each output channel shall incorporate external disable control contacts and shall have floating status output contacts to maintain isolation from other equipment.
    - Input and output signal range from 50 mvolt peak to 1 volt peak.
    - Nominal input impedance 10k ohm nominal output impedance 200 ohm.
    - All wiring shall be fault protected. Front panel led's shall indicate operating status. Units shall support redundant operation.

- Paging Amplifier Boards
    - Paging Amplifier Boards (PAB's) shall mount in I/O card cage or remote receiver units and provide eight (8) independent audio channels rated at five (5) watts RMS per channel into a 70 (25) volt loudspeaker circuit. Units shall convert system digital signals to analog output signals.
    - Independent software audio level control shall be provided for each channel. Floating outputs to maintain isolation. Internal fuse shall protect circuitry. Front panel LED's shall indicate operating status.
- Switch Panel Drivers
    - Switch panel drivers shall interface up to 128 switch contacts and led indicators to graphical or similar switch control panels. Switch function assignment and led indicator signaling shall be software configurable.
    - Units shall incorporate isolation diodes and fast switch scanning to ensure both single and multiple switch presses are not missed.
    - Switch panel drivers shall be designed for wall mounting under control consoles. Communication between the switch panel driver and the SAC computer shall be through the free topology network.
- Intercom Stations
    - Intercom stations shall be tamper proof and weatherproof, maximum security grade, single button recessed intercom stations, designed for mounting on standard 2-gang outlet boxes. Contractor shall confirm size and provide accordingly. Faceplates shall be constructed of brushed stainless steel. Internal steel offset grille shall restrict inserting objects through speaker grille.
    - Each intercom station shall incorporate an internal loudspeaker, microphone pre-amplifier and function multiplexing circuitry. One pushbutton shall be provided on each station. Pushbuttons shall be software assignable for placement of call requests.
    - Pushbuttons shall be single piece stainless steel construction and be back stopped to prevent excessive travel. Switch shall have positive tactile action with 1 million operation lifetime.
    - Loudspeakers shall be waterproof mylar cone type.

- All intercom station functions shall be transmitted over a single shielded pair cable. Stations shall be provided with insulation displacement connector that requires no wire stripping for installation.

- Outdoor intercom stations shall be identical in all respects to standard intercom stations except that all metal plates and hardware to be stainless steel, and internal circuitry and components to be conformally coated.

- Each button shall be programmable, through the system, to call the master stations or to access any specific group function, e.g. group call, alarm call, etc. The labels and buttons shall be color coded, thorough fluorescent paint fill, within the engraved labeling and graphic identifiers.

- Loudspeaker Intercom Talkback Kit

  - Intercom talkback kits shall be used to interface 8 ohm loudspeakers to system headend for two-way voice communication.

  - Units shall include microphone preamplifier, line supervision electronics, loudspeaker transformer, and mounting hardware.

- Exterior and Interior Paging Speakers

  - Provide paging horns to allow intercom system paging exterior areas. The horn shall produce, as a minimum, 120 db at 4' with 20 watts of pink noise. Mount horns 12'. Above finished grade level. Provide all required page adapter intercom system interface equipment. Provide wide angle professional paging horns with weatherproof mounting hardware. Provide with necessary corrosion proof hanging brackets and stainless fasteners.

  - Provide self-contained spherical, 8”, surface mount speakers and enclosures in mechanical spaces and unfinished areas.

    - The loudspeaker shall be a self-contained, wide range device with a wide coverage pattern. The frequency response shall be 55hz – 17khz, + 6db; the vertical polar coverage shall be 180 degrees within + 5db.

    - The loudspeaker shall have a minimum sensitivity of 94db spl at 1 watt/1 meter, a continuous power handling capability of 100 watts rms, and a rated impedance of 8 ohms.

    - The loudspeaker driver shall be one 8" woofer with a 1" dome tweeter mounted coaxially. The driver shall be mounted in a spherical enclosure. All hardware shall be stainless or plated steel.

        - Provide ceiling mounted flat mounting brackets as required. Single point suspension shall not be permitted.
        - Provide epoxy resin anchors for ceiling brackets. Provide stainless captive nylon/castigated nuts for securing unit to ceiling bracket.
    - Provide stainless steel or aluminum baffles and backboxes for all speakers in non-ceiling corridor spaces.

- Paging Amplifiers and Distribution
    - Provide class 2 audio distribution for all paging speakers using 25 volt or 70 volt distribution. Conform to local code requirements for low/high voltage distribution in conduit with low voltage control and communication cabling.
    - Provide speaker matching transformers and level control transformers with less than 1% distortion at rated power. Transformers shall be rated for full capacity of loudspeakers served.
    - Provide amplifier matching transformers with less than 1% distortion at rated output power. Transformers shall be rated for full capacity of amplifier served.
    - Provide minimum of 16 watts of amplifier for each exterior horn speaker in power load calculations plus 50% spare capacity.
- Video Master Station:
    - Product: IP desktop station
        - Power Source: Supplied from POE switch
        - Call Tone: Audible indication and LED blinking (until call timeout)
        - Communication:
            - Handset
            - Hands-free
        - Acoustic Echo Cancellation
        - Active Noise filtering
- Video Intercom Station:
    - Power Source: Supplied from UPS backed Central control unit

- Communication: Open voice hands-free communication
- Camera: 1/4" (6 mm) color CMOS
- Minimum Illumination: 5 Lux
- Camera Angle: Wide, approximately 170 degrees (Horizontal)
- Ambient Temperature: -10 to 60 degrees C (+14 degrees F to +140 degrees F)
- Mounting: Flush mount

Wire and Cable

- All Intercom wiring shall be Category 6 cable. Refer to Electrical Requirements for additional Category 6 cabling requirements.

Emergency Telephones

- The Emergency Phone shall be an easily identifiable, vandal resistant communications device Pedestal that is Americans with Disabilities Act (ADA) compliant, multi-functional, freestanding, and constructed of heavy steel. The unit shall be virtually impervious to damage, and shall include a high quality, vandal resistant, hands-free communications device illuminated by a high intensity faceplate light, a powerful strobe light and a vivid blue beacon that serves to identify the unit from a great distance. This Emergency Phone Pedestal shall have the following features:
  - High output combo LED beacon/strobe
  - 24v LED low consumption area light
  - LED lit stainless steel faceplate
  - Faceplate assembly with single red PUSH FOR HELP button
  - Provide Turbine TCIS-2 Series intercom station
  - The unit shall be mounted onto four anchor bolts that are set into concrete. Standard ¾” x 24” galvanized steel anchor bolts, nuts and washers shall be used as supplied. The unit shall mount ½” above the concrete to allow air flow within the unit.

Examination

- Examine areas to receive video intercom system.
- Notify Project Company of conditions that would adversely affect installation or subsequent use.
- Do not begin installation until unacceptable conditions are corrected.

Installation

- Install Security Intercom System (SIS) in accordance with manufacturer's instructions at locations indicated utilizing factory trained and certified Project Companies. ~~installers~~
- Mount equipment plumb, level, square, and secure.
- CAT-6 Cables:
    - Run cables from and home run from device location to Security Closet. No splices permissible.
    - Maintain twists of cable pairs to point of termination or no more than 0.5" (13 mm) untwisted.
    - Do not remove more than 1" (25 mm) of jacket when terminating cables.
    - Cable Bends
        - Make gradual bends of cable, where necessary.
        - Do not make bends of cable sharper than 1" (25 mm) radius.
        - Do not allow cable to be sharply bent or kinked at any time.
    - Cable Ties: Dress cables neatly with cable ties using low to moderate pressure.
    - Cross-connect cables, where necessary, using CAT-6 rated punch blocks and components.
    - Do not splice or bridge cables
    - Cable Pulling
        - Pull cable with low to moderate force.
        - Do not use oil or other lubricants not specifically designed for cable pulling.
        - Keep cables as far away from potential sources of EMI as possible.

- Do not tie cables to electrical conduits or lay cables on electrical fixtures.
- Cable Supports
  - Install proper cable supports a maximum of 5' (1524 mm) apart.
  - Do not support cables by ceiling tiles.
    - Label Cable Termination Points: Use unique number for each cable segment.
- Testing Cables: Test installed cable segments with cable tester.
- Jacks: Install jacks to prevent dust and other contaminants from settling on contacts.
- Cable Slack
  - Leave extra slack on cables, neatly coiled-up in ceiling or nearest concealed place.
  - Leave a minimum of 1' (305 mm) of cable slack at door station side and a minimum of 10' 3048 mm) of cable slack at CEU side.
    - Do not install cables taught.
- Grommets: Protect cables with grommets where passing through metal studs or other items that could damage cables.
- Do not mix TIA/EIA 568A and 568B wiring on same installation. Use TIA/EIA 568B wiring throughout installation.
- Staples
  - Do not use staples that crimp cables tightly.
  - Do not use T-18 and T-25 cable staples.
    - Use firestop cables that penetrate firewalls.
- Use plenum-rated cables where mandated.

Adjusting

- Adjust integrated security and communication system for proper operation in accordance with manufacturer's instructions.

Protection

- Protect installed integrated security and communication system from damage during construction.

5.3 Access and Control Monitoring System

Summary

- Provide an access control panel in each security equipment closet.
- Provide a main access control panel in the main security Electronics Room.
- All access control computers, servers, and panels shall be connected to the security network.
- All security devices (PIR's, door contacts, card readers and electric strikes) shall be hard wired to the nearest access control panel.
- Each access control panel shall be connected to the security network by Cat. 6. cables.
- All other devices shall be connected by cables(s) by device manufacturer recommendation.
- One (1) access control server shall be provided in the Security Office.
- One (1) access control workstation shall be provided in the Security Office.
- The security system shall be interfaced to the Detention Area Control system, intercom system, and video surveillance system for event call up features.
- The Access Control system shall be interfaced to the Detention Area Control system for release of detention door shown with card readers. Provide power supplies in each Security Equipment Room as required to support all field devices in the area serviced by that closet.
- All cables shall be run in conduit stub in walls and J-hooks above accessible ceiling.
- Provide one (1) badging station with the following:
    - Laptop access control workstation
    - Digital camera
    - Backdrop
    - Photo light
    - Proximity card printer

Generalized Description of Work

- Provide Access Control System including network computers, controllers, card readers, cards, duress devices, and badging station.
- Populate the Access Control System database with the employee provided by the County/State.
- Provide detection devices such as motion detectors.
- Interface, monitor, and control electric locksets provided by the door hardware Project Company. ~~Installer~~
- Provide magnetic door switches.
- Provide request for egress Passive Infrared Detectors (PIR) and pushbuttons.
- Provide all required power supplies. Coordinate with the Project Company. ~~Electrical Installer~~
- Provide all cabling connections required.
- Coordinate conduit requirements with the Project Company. ~~Electrical Installer~~
- Coordinate all door hardware with door supplier.

System Description

- The SES shall provide a central server and workstation which connects to Remote Control Panels (RCP's) within the new Courthouse.
- The connection to the RCP's shall be over a LAN connection.
    - The central system shall provide real-time display of all system events, archive all events in a history file on the hard disk, and serve as the instrument through which all system programming is accomplished.
    - Access Control System Server (ACSS): Shall be installed in the Main Distribution Security Closet - also known as the MDF.
    - The server shall run the system database service for interfacing with the system database, a panel service for polling system panels and communicating with the database service, a user interface for monitoring system activity and database administration.

- The system server shall also have the most recent Microsoft Windows operating system supported by access control system manufacturer, installed as the operating system for the access control software.

- A Personal computer shall be configured for the intended system function by loading the appropriate services and operating system software.
- Access Control Work-Station (ACWS): Shall be desk mounted and installed in the Security Office.
  - The ACWS shall connect to the ACSS for local, site-specific control and monitoring of the Access Control System.
  - The workstation shall also have most recent Microsoft Windows operating system supported by access control system manufacturer, installed as the operating system for the access control software.
  - A Personal computer shall be configured for the intended system function by loading the appropriate services and operating system software.
  - This station shall be integrated through serial or network communications to the digital video recording and monitoring system and the intercom system to provide integrated control and monitoring functions.
  - This station shall be loaded with the site map and security device icons for graphical screen control and monitoring of the security system.
- Access Control Badging Station (ACBS): Shall be located at a location indicated by the County/State.
  - The ACBS shall connect to the ACSS. The station shall have the most recent Microsoft Windows operating system supported by Access Control System manufacturer, installed as the operating system for the access control software.
    - A computer shall be configured for the intended system function by loading the appropriate services and operating system software. This station shall be integrated through serial or network communications to the Access Control System for the primary function of badging.
    - This station shall also be loaded with the site map and security device icons for graphical screen control, monitoring of the security system, and shall provide fully functional backup to the workstations.

- Remote Control Panels shall be installed, communicating to the Central Server over a local LAN connection. The RCP's shall connect to all initiating and alarming devices. The system shall provide:
    - Control Access to building and selected areas using proximity cards.
        - Selected Exterior Doors: Control access into building at locations as indicated.
        - Selected Interior Building Areas. Control access into areas as indicated.
    - The System shall Restrict Access of individual cardholders by time of day, day of week and specific points of entry via system software.
    - Unlock Doors to building and selected areas automatically for a scheduled period of time throughout the day allowing free access and egress without the use of a card and avoiding the generation of an alarm condition on the access control system.
    - Monitor Points in building and selected areas which may provide unauthorized access or egress and may be a point for forced entry.
    - The system shall report changes in status for all monitored points indicating the specific location so the operator can respond appropriately to selected Exterior Perimeter and Internal Points.
    - Provide four-state supervised inputs to system for monitoring the status of doors.
- Provide computer display of graphic building maps with graphic display of door status, door alarms, security panel and alarms on each computer. This shall be accomplished by loading a bit map of the architectural backgrounds.
- Provide network interface with the video surveillance system for video call up on the workstation computer.
- Provide interfacing to local Fire Alarm System for the release/unlocking of all doors identified by the AHJ.
- Provide centralized report generation of all alarm signals.
- Provide centralized card access proximity card printing including digital pictures.
- Provide UPS power backup.

Related Work

- In addition to work described above, the Work shall include, but not necessarily be limited to the following:
    - Equipment identification as specified elsewhere.
    - Providing all cabling and connections required for complete and functional systems.
    - Providing 120 VAC un-interruptible power as required for all equipment provided under this contract.
    - Assemble equipment furnished disassembled in accordance with manufacturer's recommendations.

Qualifications

- The ~~installer~~ Project Company shall be factory certified to install the purchased system by the hardware/software provider.

Database

- The system shall be of an open architecture design and shall support industry standard databases such as Microsoft SQL Server, Oracle Server, IBM DB2 or MSDE database.
- The database shall reside on the system server at Central Control for district wide database services, system programming, system monitoring, administrative services, report, and proximity card generation.
- The system shall be capable of utilizing a true client/server network configured to support the system database service, all services and user interfaces optimizing the users' options for system programming, event monitoring, and record keeping.

System Software

- Software Capacities
    - System software and language development software shall be existing, industry standard, and of a type widely used in institutional systems. Operating system shall be multi-user/multi-tasking capable of operating on a non-proprietary CPU. The application software, substantially as offered, shall be written in a high level, industry standard programming language.

The system shall be modular in nature, allowing the system capacities to be easily expanded without requiring major changes to the system operation and maintaining all defined system data as well as historical information.

- All System functions shall be accessible via point and click mouse control. Systems requiring command string control or complex syntax are not acceptable. The system software shall include the following features and be configured for a minimum:
  - (256) readers
  - (250,000) active cardholder records
  - (30/256) simultaneous client PC licenses
  - (256) programmable holidays
  - Number of assets = 40,000
  - Operator accounts with unlimited definable privilege levels
  - Audible alarm annunciation at operator workstation
  - Unlimited graphic maps to be displayed on the operator workstation monitor
  - Remote network diagnostics
  - Event scheduling
  - An unlimited number of user defined card holder data fields
  - An unlimited number of door groups
  - An unlimited number of areas
  - Cardholder access privilege activation date and time
  - Cardholder access privilege expiration date and time
  - Americans with Disabilities Act (ADA) compliance in door and access operation
  - Interface and integration with Video Surveillance System

        - Field panel communications through various means including hardwired Ethernet network

- Software Operation:

    - The system shall provide a top-down configuration methodology. Top-down programming shall allow the system operator to configure the system software and hardware configurations in a logical flowing method. The system shall allow the operator to start at the highest configuration level of the system and then move down through the lower configuration levels without having to move back and forth between a variety of menus.

    - Where the operator may be presented with a choice of pre-defined objects, the system shall provide a pop-up pick list. The operator may choose an object in the listing by clicking on the item. If the object has not been pre-defined, the operator may define the new object from the pop-up pick list.

    - The system shall utilize dynamic icons. The dynamic icons shall change appearance, in both color and icon display based upon the status of the associated object. This appearance change shall occur in real time and shall not require the system operator to perform a screen refresh or exit the current screen.

    - Dynamic icons shall be provided to represent:

        - Intelligent field panels

        - Door lock control

        - Cameras and domes

        - Alarm input

        - Output control relay

        - System/alarm event

        - Manual operator actions

    - For intelligent field panels hard wired to the host computer, the dynamic icons shall reflect the true state of the device represented by the icon. For example, if an operator issues a command to unlock a door, and the field panel which controls that door is not in communication with the host computer, the icon shall not change state or appearance.

- Where certain data fields within data screens may contain the same information, the system shall provide the ability to define default settings for these data entry fields. The operator shall be able to change the default setting without impacting objects that have already been defined.

- Database Connectivity: The Security Management Control System shall be constructed to be database independent and shall support at a minimum Microsoft SQL Server 2008 (Express, Standard, or Enterprise), for data protection, redundancy and manageability. The system shall allow the ability to perform writes to the system database to import personnel data directly into that database. This data shall then be automatically downloaded to field devices in the same way as manually entered information.

- The software manuals for the Security Management Control System shall provide complete documentation outlining the database schema used within the system. This documentation shall be sufficient to allow a person, moderately skilled in databases, to extract information from the Security Management Control System's databases. The database schema information shall include information on the personnel tables, history and configuration tables.

- It shall be possible to use third party report tools, such as Crystal Reports, to generate reports not already provided by the Security Management Control Systems, such as statistical or graphical reports of system activity.

- Database password protection: Database level User name and Password protection shall be provided for users. Users shall be required to supply a User name and Password when they connect to the SMCS database. User names and passwords shall be configured via the user configuration functionality currently available in the Administration utility.

- Date format: The system shall support the date being formatted in DD/MM/YY or MM/DD/YY, depending upon local date formatting.

- Card reader LCD panels: The system administrator shall be able to define the language and date format that shall be used for display of messages on reader LCD panels.

- Web Client

  - The system shall support a Thin Client to provide remote access to the Access Control System Server Workstation via a web browser. The Thin Client shall support at a minimum Microsoft® Internet Explorer 8, 9, and 10 and Mozilla Firefox® (32- and 64-bit), Google™ Chrome (32- and 64-bit).

The Thin Client shall support 128-bit encryption using SSL for secure communication between server and clients.

- The Thin Client shall support Single Sign-on utilizing Windows Authentication. The privileges of the Access Control System operator shall be propagated to the Thin Client User allowing only access to Security Objects for which the Access Control System Operator is authorized. The Thin Client shall provide support for Partitioning of the system and utilize the Partitions assigned to the Operator.

- The Thin Client shall support an Activity Monitor to provide a scrolling display of system activity. Activity shall be restricted based upon the Operator's Privilege and Partition assignments. Display controls shall include page up, page down, and a freeze function.

- The Thin Client shall support the ability to display a door activity report from the web client cardholder record configuration view. In addition, it shall provide the ability to display the Activation/Expiration Date and Time for each credential assigned to a cardholder. The thin client shall display all user-defined personnel fields and the details of each assigned access clearance in a separate window.

Card Reader

- Provide for all doors as outlined, high-security vandal-proof proximity card readers. It shall meet the following requirements:
  - It shall be vandal-resistant.
  - It shall be compatible with proximity card technology.
  - It shall support 8 or 26-bit Wiegand keypad output or 8-bit smart output.
  - It shall feature indelible graphics and labeling.
  - It shall mount to standard electrical backboxes (single gang).
  - All mounting hardware shall be tamper proof, center-pin torx head hardware (six-lobe).
  - A Lifetime warranty shall be provided.
- Provide proximity card readers shall comply with UL294 standards.

- The reader shall work with passive proximity cards. A red LED shall indicate power to the reader. When a proximity card is presented to the reader, the red LED shall flash green and the beeper shall sound briefly indicating to the cardholder that the card was read. A longer duration flash and beep shall follow for an authorized card. On reader power-up, an internal self-test routine shall check and verify the setup configuration, determine the internal or external control of the LED and beeper and initialize the reader operation.

Access Card Requirements

- Access cards shall be PVC proximity type.
- The Vendor shall be responsible for providing a cross-reference list showing the serial number and the embedded number for each card.
- Each card shall have a return address if found.
- Each card shall have, preprinted by the factory, one side of the card. The preprinted information could contain company logo, building facade, return address, or any color graphic as directed by the County/State. The manufacturer shall display different designs to assist the County/State with choice.
- Cards shall be pre-fabricated, credit-card size, generic 26 bit proximity card constructed of molded plastic. A punched slot shall be provided for a strap or clip. The card shall be capable of having multi-color custom graphics and permanently marked numbers printed directly onto both sides. The card shall be made of robust ABS plastic to provide maximum protection for the circuitry inside and provide minimal flexing which could cause damage to the card. The user may specify codes or numbers and exact replacement of cards that may be have been lost, damaged or stolen shall be available upon request. All cards shall be passive devices with no internal battery, but shall contain a semiconductor element that is energized when brought within the operating range of the reader causing transmission of the code from the card to the reader.

Allowable Card Access Time Limits

- Under all conditions, maximum access time shall be 0.75 seconds.
- Maximum allowable access time is defined as the time period starting with presentation of card to reader (completed read cycle) and ending with complete actuation of door release module (or relay as applicable). It does not include the mechanical time inherent to the unlocking mechanism.

Access Control System Server Workstation

- The following are the server grade Access Control System Server Workstation requirements:
    - CPU: Intel current generation Xeon quad core processor.
    - Graphics: Radeon or nVidia 2GB (minimum).
    - 10/100/1000 Mbps Ethernet interface card.
    - System Software: Microsoft Windows 7 Professional or Microsoft Server 2008 R2.
    - Program Software: Client component. Access Control System software as recommended by the Access Control System manufacturer.
    - Memory: 8GB (minimum)
    - Hard Drive: 500GB (minimum)
    - Monitor Mounting: Desk

Door Position Switches

- The door hardware supplier shall provide concealed, biased, door position sensors for all doors that require monitoring.
- Recessed magnetic door contacts shall be installed by the door and hatch hardware supplier on all doors as defined.
- Each magnetic door contact shall be configured by the Project Company ~~installer~~ as a separated alarm point. Double doors and banks up to six single contiguous or three contiguous double doors shall be configured as a single alarm point.
- All magnetic door switches shall be wired, connected, and tested by the Project Company. ~~installer~~
- ~~Coordinate with the door hardware suppliers.~~
- If in a unique or difficult situation and a recessed magnetic door contact is not feasible, then a surface mount contact may be substituted if it meets the requirements of a high security biased switch configuration with concealed terminals, aluminum housing, and armored cable.
- Any doors found not already prepped to receive the recessed door contact shall be so fitted on site ~~as part of this contract.~~

Request-to-Exit (REX) PIR

- REX devices shall be UL listed and approved for egress application with the following features:
    - Single or double door use
    - Wall or ceiling mountable
    - Internal vertical pointable with wrap-around coverage pattern
    - Adjustable latch time
    - Selectable fail-safe/fail secure mode

Door Release Pushbutton

- Provide stainless steel door release pushbutton
- Door release pushbutton shall be engraved “PUSH TO EXIT”

Security Door Hardware

- As outlined in the Door Hardware requirements, the door hardware supplier shall provide electric strikes and electrified panic devices to be installed and connected by the Project Company. ~~Security Installer~~ Provide all door power supplies required.

Door Management Alarms (DMA)

- ~~Installer~~ Project Company shall provide door management alarm devices as outlined, interfaced to the card access control panel.
- Provide door management alarms for local and remote monitoring annunciation of the status of doors (door prop/door held, door intrusion/door forced or secure).
- DMA shall be capable of operating in a “stand alone” configuration or with an access control system, utilizing all reader technologies: i.e. proximity, weigand, mag stripe, bar code or biometrics.
- Local sounder (field selectable volume 96 or 103 dB @ 3') shall be used to indicate both door prop/door held and intrusion/door forced conditions after a user selectable quiet, or access, time (0 seconds to 90 minutes) has expired. Sounder shall be incorporated into the faceplate of the DMA.

- Form C (N/O and N/C) contracts shall be available for the following outputs: Door Contact Status, Door Prop Alarm, Intrusion/Tamper Alarm and Bypass/Key Switch Status.
- The alarm (intrusion) contact shall change state upon the recognition of an alarm or tamper condition to alert remote monitoring equipment.
- The unit shall remain in alarm until reset by integral key switch, remotely through a dry contact or automatically through an on-board timer (user settable from 0 seconds to 5 minutes or MANUAL).
- An integral key switch shall be available for alarm shunt or alarm reset and be incorporated into the faceplate of the DMA.
- A Bi-Color status LED shall be incorporated into the faceplate of the DMA.
- A remote LED output shall be provided to control a bi-color LED that follows the actions of the faceplate mounted LED.
- Inputs shall include a N/C Dry Contract for the door, Voltage Sense (12-24 VAC/DC) to monitor electric lock voltages and a N/O or N/C Dry Contact Shunt Input.
- The following timers shall be user settable: Auto-reset, Alarm delay, Silent time and Shunt Delay.
- The DMA shall be mounted to the wall adjacent to the monitored door at 42" above finished floor. The unit shall be mount in a standard 2 gang (3 gang for rim cylinder key switch mode) electrical box with a minimum depth of 2 ½".

Installation

- Install materials and equipment in accordance with manufacturer's printed instructions to comply with governing regulations and industry standards applicable to the work.
- Arrange and mount all equipment and materials in a manner acceptable to the County~~/ State~~.
- Coordinate with the County~~/State~~ all programming for access control privileges, control restriction, normal operations, off hours and holiday schedules, report generation, badging configuration and information and pin number generation before Final Acceptance. Make minor adjustments at no cost to the County~~/State~~.
- Installation shall conform to the basic guidelines
    - Use of approved wire, cable, raceways, wiring, devices, hangers, support, and fastening devices.

- Separation of high and low voltage wiring is required throughout the installation.
- All wiring shall be thoroughly tested for grounds and opens before final connection.

- Conduit shall be provided for risers. Horizontal wiring shall run without conduit unless required by code, see - QUALITY ASSURANCE. All power wiring shall be in metallic conduit. The maximum conduit fill shall not exceed 40% of rated capacity. Refer to National Fire Protection Association 70-NEC for additional requirements.

- Cabling and Wire Requirements
  - Refer to Electrical requirements for all raceway, surge, and wiring requirements.
  - The individual systems low voltage cabling shall use separate conduit/raceway junction boxes and enclosures, then electric power cabling.
  - The minimum low voltage input/output cabling for Access Control System shall be #18 AWG unless specifically specified. Provide minimum 3 pair, twisted, individually shielded pair type cabling for card readers and keypads. All cabling shall be jacketed. The systems cabling shall meet the requirements of National Fire Protection Association 70/NEC Articles 725, 760 and 800 as applicable for each type of system specified.
  - The minimum bend radius of all conduits provided by others is 6 inches. Provide and maintain pull strings/tapes/ropes in all conduits for future installation of additional cabling.
  - All pull strings installed or placed in conduits that already contain, or that shall contain system cabling, shall be able to be removed from the conduit without causing any damage to the cabling already contained with same conduit(s).

- Junction Boxes, Enclosures/Cabinets, Equipment Racks
  - The equipment enclosures shall be installed at approved locations and be typically ventilated as required to maintain the environmental conditions specified by the electronic equipment manufacturers.
  - All junction boxes and pull boxes shall be labeled. The box label shall state the system and use of cabling. The labeling shall be made with markers which are indelible when and after in contact with water and oil.
  - Each box and enclosure shall contain a cabling and wiring log identifying all cabling accessible whether it is connected or is passing by.
  - Refer to other sections of this Appendix for additional requirements.

- Grounding and Surge Protection
    - Provide single point grounding of the individual systems as recommended by IEEE and system manufacturers. Provide all cabling, bonding and insulation materials as required. Provide surge protection and clamping for all circuits. Coordinate all grounding, surge protection, and manufacturers.
    - Coordinate grounding requirements to preclude closing of ground loops via peripheral equipment supplied from different electrical power sources. Provide isolation transformers and other equipment as required.

Adjusting, Testing and Cleaning

- ~~Installer~~ Project Company shall be required to perform complete testing and verification of the following:
    - Card reader maximum access time shall be 0.75 seconds under all system loads.

5.4 Video Surveillance System

Site Work

- Site work shall be coordinated with all trades having related work on site including general, building, structural, civil, site, landscape, mechanical, electrical, and others.
- Careful planning must be implemented to achieve full security at the site after construction with no lapses at any location.
- The work includes full certification and testing of the system prior to placement into commission.

Description of Work

- Provide materials, labor, equipment and service necessary for a complete IP based video surveillance and digital recording system as described herein including: cameras, housings, mounts, cables, fiber optic interface cabinets, video detection equipment, network digital video recording/storage/retrieval system, network digital video monitoring system and appurtenances. Provide video surveillance field of view to meet the requirements outlined.
- Provide transmission of the video, Pan Tilt Zoom (PTZ) Control and Video Surveillance System (VSS) keyboard signals to the Security Office for interior and perimeter exterior cameras.
- The ~~Installer~~ Project Company shall provide any additional PTZ/VSS control keyboard control cabling from the fiber optic interface cabinet to the Security Room required for remote control by Security Office equipment.
- Refer to the VSS product paragraph for information on cameras, lenses, and mounting. Camera aim, adjusting and exact mounting location are the responsibility of the Project Company ~~Installer~~. ~~Installer~~ Project Company shall provide complete surveillance of the areas described.
- ~~Installer~~ Project Company shall demonstrate camera views to ~~Using Agency~~ County Sheriff department prior to permanent mounting for all cameras using 19" demonstration monitor and recommended camera/lens coordination. ~~Installer~~ Project Company shall make any needed camera focus/lens adjustments at no additional cost to the County~~/ State~~.
- Color video surveillance cameras shall be provided at doors, gates, sally port, and corridors controlled from Security Office and Video Surveillance.

- Lens combinations are recommendations only.
- Cameras shall be provided for remote observations of all public areas and critical points.
- Provide video surveillance monitors for all Video Surveillance Workstation locations as indicated. Provide video surveillance monitor mounting system including all mounting hardware.
- All cameras shall be displayed for cursory review by the Security Office operator. Cursory review shall be defined as multiplexed/split screen display (cameras/monitor) and sequential display for all video surveillance cameras. Active scenes with entry/exit or other critical events shall be displayed on dedicated call-up monitors for the operator to focus on events which require his/her acknowledgment and decision.
- Typically, the call-up functions shall be initiated through interfacing of video server/ video recording devices/processing equipment with video intercoms, card readers, and other systems described. In addition, the ~~Installer~~ Project Company shall provide video motion detection functions for all cameras to activate the above-described call-up functions associated with critical events and areas such as intrusion/unauthorized access. The video surveillance system shall include all hardware and software required for automatic and manual enabling of PTZ camera preset zones and motion detection, or video surveillance scanning modes.
- Provide all Ethernet switches and proper fiber optic modules for transmission of the IP video signals from the cameras to the Security Office and Video Surveillance Workstations for viewing and to Security Room for recording.
- Provide camera/lens combinations mounted so that they overlap surveillance areas – with no missing locations.
- All cameras shall be recorded digitally on a Network Video Recording System. Provide complete video recording systems in Security Room, review console, patch capability, PTZ keyboard, and other equipment shown on Contract Documents.
- Network digital video recording computers shall be rack-mounted in equipment racks located in Security Room.
- The VSS shall display all cameras on video monitors installed at locations as indicated.
- Video signals from cameras shall be multiplexed to provide for simultaneous recording and display of all cameras.
- All video surveillance cameras shall be recorded digitally for a minimum of 30 days of First In First Out (FIFO) recording/storage, at a minimum of 15 frames per second (fps).

- Digital recording, and required associated equipment shall connect, communicate, and integrate into the Access & Detention Control System to provide camera call-up and alarm recording as required elsewhere. The ~~Installer~~ Project Company is to provide all associated equipment required to provide such functionality.
- The VSS shall automatically display on the monitors the associated exit door camera upon card reader and/or door position switch activation. This shall be accomplished through integration with the Access & Detention Control System.
- All cameras shall be able to be displayed on the monitors located in the Security Office.
- Recorded video playback system shall be provided at the security rack in the Security Room.
- Mount interior cameras in either ceiling and/or corner mount housings as indicated. All exterior cameras shall be mounted security grade, weatherproof, heated housings.
- Configure the network as required for proper system function.

System Description

- An IP-based Video Surveillance System (IP-VSS) shall be provided as shown on the Contract Documents.
- The IP-VSS system shall be designed around the use of security grade IP VSS cameras.
- All video from the IP-VSS cameras shall be transmitted by IP via the exclusive security network.
- All computers connected to the Security Network shall be capable of displaying both live and recorded video from all cameras.
- The system shall be capable of providing both single camera and multiplexed video display on any viewing stations.
- The system shall be capable of providing event driven or call-up video switching.
- The system shall record all of the IP-VSS cameras provided.
- The system shall be designed to provide all functions typically found in a traditional VSS system without requiring a matrix switch.
- The system shall be controlled via a map-based Graphical User Interface (GUI). The GUI shall allow the user to select cameras by navigating through a map of the facility. Camera icons shall indicate the location of each camera.

- The IP-VSS system shall be integrated with the Security System to allow easy movement between Access Control System functions and VSS functions.

- The system shall be designed to permit the future expansion of the system with minimal modification to the system programming or configuration. The County~~/State/User Groups~~ shall be capable of adding cameras, viewing computers, or video recording servers by connecting these devices to the security network and performing user level device configuration.

Related Work

- In addition to work described above, the Work shall include, but not necessarily be limited to, the following:

    - Equipment identification as specified elsewhere.

    - Providing all cabling, conduit and connections as required for complete and functional systems.

    - Providing 120 VAC and low voltage power as required for all equipment provided under this contract.

    - Assemble equipment furnished disassembled in accordance with manufacturer's recommendations.

Reference Standards and Codes

- National Electric Code (NEC)

- Underwriters Laboratory (UL)

Overview

- Certain devices described may not be applicable to all systems. All devices required to complete the installation may not be described. It is the responsibility of the ~~Installer~~ Project Company to provide a complete working system.

- All system components shall be approved for the function they shall perform. Devices that must be modified or are not UL-listed shall not be approved.

IP Fixed Cameras - Interior

- Provide 3 mega-pixel fixed IP vandal resistant cameras that meet the following performance reliability and operational requirements:
    - Imager: 1/3.2" RGB CMOS
    - Usable Night-Mode Picture at 0.04 Lux
    - Usable Full Color Picture at 0.2 Lux
    - Default Lens: 3mm/9mm – Varifocal lens
    - Video Output: M-JPEG, MPEG-4 and/or H.264
    - Operating Voltage: 12VDC or 24VAC
    - Power-Over-Ethernet (PoE) IEEE 802.3af capable
    - 10Base-T/100Base-TX PoE
    - Include backlight compensation circuitry

IP Fixed Cameras - Exterior

- Provide 5 mega-pixel fixed IP vandal resistant exterior cameras that meet the following performance reliability and operational requirements:
    - Imager: 1/3.2" RGB CMOS
    - Usable Night-Mode Picture at 0.04 Lux
    - Usable Full Color Picture at 0.2 Lux
    - Default Lens: 3mm/9mm – Varifocal lens
    - Video Output: M-JPEG, MPEG-4, and/or H.264
    - Operating Voltage: 12VDC or 24VAC
    - Power-Over-Ethernet (PoE) IEEE 802.3af capable
    - 10Base-T/100Base-TX PoE
    - Include backlight compensation circuitry

- Provide all required mounting accessories for wall, pedestal, and pole mounting of cameras as required.

PTZ IP Camera - Exterior

- Provide multi-mega-pixel PTZ IP vandal proof cameras for exterior use that meet the following performance reliability and operational requirements.
  - Imager: 1/2.8" CMOS
  - Usable Night-Mode Picture at 0.03 Lux
  - Usable Full Color Picture at 0.3 Lux
  - Video Output: M-JPEG and/or MPEG-4, and H.264
  - Operating Voltage: 24 VAC 60 Hz
  - Max Aperture: f/1.4 - 4.6 auto focus
  - Backlight compensation circuit PTZ

360 Degree Camera

- Provide 360° single lens camera using H.264. Camera shall have non-mechanical moving pan and tilt with digital zoom functionality. The camera shall meet the following performance reliability and operational requirements:
  - The camera shall provide at least two (2) individually configured full resolution video streams over IP networks with support for the following resolutions:
    - 2,592 x 1,944 (4:3) 360° Overview
    - 1,600 x 600 (8:3) Panorama
    - 1,600 x 1,200 (4:3) Double Panorama
    - 1,600 x 1,200 (4:3) Quad View
    - 800 x 450 (16:9) View Area 1-4
    - 800 x 600 (4:3) View Area 1-4
    - The camera shall be able to provide landscape format in 4:3, 8:3, and 16:9 aspect ratio.

- The camera enclosure shall include the following:
  - Manufactured with a vandal resistant body providing encapsulated electronics
  - Vandal resistant casing with clear transparent cover
  - Impact resistance according to IK08
- Event Functionality:
  - The camera shall be equipped with an integrated event functionality, which can be triggered by:
    - Video Motion Detection
    - Schedule
    - Camera tampering
    - Embedded third party applications
    - Edge storage disruption detection
    - PTZ functionality
- Response to triggers shall include:
    - Notification, using TCP, SMTP or HTTP
    - Image upload, using FTP, SMTP or HTTP
    - Recording to local storage or network shared storage
    - Go to Preset positions
  - The camera shall provide memory for pre-alarm and post-alarm recordings.
  - Event functions shall be configurable via the web interface.
- Electronic PTZ Emulation shall include:
  - Non mechanical PTZ functionality (no moving parts)
  - 180° rotation
  - Digital zoom

- Reach selected position within 0.1 second
- At least 100 preset positions
- A guard tour functionality which allows the camera to automatically move between selected presets using an individual speed and viewing time for each preset.

Exterior Video Surveillance Cabinet

- Provide exterior vandal proof IP66/Nema 4X rated cabinet for exterior locations where required to provide appropriate optical media converter and power connectivity for exterior cameras.

Lenses

- Fixed camera, all lenses shall be variable focus with internal spot filter. Lens focal lengths shall be selected as required for field of view.

LED Video Monitors

- 42" LED Video Monitor:
  - Provide 42" LED video monitors with the following characteristics or features:
    - VGA, DVI or HDMI input: Provide appropriate interface converter as required
    - Aspect Ratio: 16:9
    - Resolution: 1,080P (1,920 x 1,080)
    - Brightness: 450 cd/m2
    - Contrast Ratio: 3,000:1
    - Viewing Angle: 178° H/178° V
    - LED monitors shall be wall mounted
- Wall mount shall be a 3 – point swivel type to allow side-by-side monitor viewing at a comfortable angle and distance.

IP Video Surveillance Management, Recording and Viewing System

- The IP Video Surveillance Management, Recording, and viewing system shall be a combined software and hardware system. The system shall include all Servers, Computers, Network equipment and accessories required to for a fully functional IP-based Video Surveillance system.
- The system shall provide recording of all Video Surveillance IP cameras on network server or storage space.
- The system shall provide viewing of live and recorded video on network workstations as shown on the construction documents.
- The system shall be designed to meet the Video Surveillance application of the County/ ~~State~~'s security system.
- The System shall provide all common function of a matrix switch based Video Surveillance system.
- The ~~Installer~~ Project Company shall provide all required Video Surveillance equipment, network equipment, modules, power supplies, wiring, relays, etc., whether listed herein or not, to provide a perfectly operational system with no glitches, bugs, or impediments which would otherwise detract from proper system operation. ~~Installer~~ Project Company shall inform himself through thorough investigation of Manufacturer and meet all Video Surveillance Monitoring, Management, and Recording requirements as required.
- Provide an IP Video Surveillance Video Management, Recording, and Viewing System having the following features/characteristics:
    - IP Video Surveillance System Performance Requirements:
        - The system shall simultaneously provide the following feature on all servers and network workstation without any video quality degradation and loss of frames:
            - Video recording
            - Video Playback
            - Live video Display
            - Multi-screen (multiplexed) Live Video Display
            - System/Camera Configuration Adjustments
            - Camera Selection

- PTZ camera Control

- Image Quality
  - The system shall provide “Clear Picture” transmission and recording of all cameras.
  - All Video for each cameras shall be transmitted to video recording server without degradation of intelligence or color fidelity.
  - The picture shall be free of Distortion, Pixilation, Flicker, Snow, Ghosting, Frame Loss, Pixel Loss, and other forms of interference.
  - The system shall produce live and recorded video acceptable to the County/~~State~~’s Representative and the ~~Design Professional~~ Project Company.

- Video Recording
  - All IP Video Surveillance cameras provided under this project shall be recorded by the system.
  - The system shall configured to be capable of recording all cameras provided at a maximum frame rate of 30 FPS (frames per second) at maximum image resolution.
  - The system shall be configured to provide recording of all cameras at minimum frame rate of 15 FPS at an Image resolution of 2,048 x 1,536.

- Video Storage Capacity
  - The System shall be configured to provide a minimum of 30 days of video storage of all cameras.
  - The Storage capacity shall be configured based on the following criteria:
  - Operation hours: 24 hours per day.
  - Expected motion during daytime operation hours: 80%.

- Expected motion during night time lock-down hours: 25%.

- Live Video Display

- The system shall be capable of displaying all selected cameras at 30 FPS at maximum resolution.
- The system shall allow the user to select any camera to display on any system monitor.
- The system shall be configured to display full screen live video on all system monitors simultaneously.

- Multiplexed Live Video Display
  - The system shall be capable of displaying multiplexed video on all system monitors provided.
  - The system shall be configured to provide a 4x4 multiplexed video on all system monitors simultaneously.
  - The system shall support the following multiplexed views:
    - 4x4
    - 3x3
    - 2x2
  - The system shall support custom multiplexed screens.
  - The system shall support both programmed and user-selected multiplexed screen.
  - The system shall support an unlimited amount of programmed multiplexed views.
- Recorded Video Display
  - The system shall be capable of displaying recorded video on all system monitors without delay, video degradation, or loss of frames.
  - The system shall be capable of displaying recorded video at up to 30 FPS on alarm at maximum resolution on each system workstation simultaneously without delay, pixilation, freezing, jumping, etc.
  - The system shall be capable of displaying recorded video in a single camera screen or multiplexed view.
- Duplicate image display

- The system shall be capable of displaying live video from any single camera on all monitors simultaneously.
- The system shall be capable displaying recorded video from any single camera on all monitors simultaneously.
- The system shall be capable of displaying any selected multiplexed view on all monitors simultaneously.
- The system shall be capable of displaying any selected camera in a different multiplexed screen on each system monitors simultaneously.

- System Components
  - Video Surveillance System Server:
    - The Server shall run the system software and control the entire Video Surveillance network.
    - The server shall provide the system management, control, logging, and recording functions.
    - The ~~Installer~~ Project Company shall provide additional servers as needed to meet performance requirements and as required for overall system function.
    - The ~~Installer~~ Project Company shall provide all storage devices - Additional Hard drives, RAID, NAS, or SAN required for full system function.
  - Security Office Video Workstations
    - Provide video workstations
    - Viewing stations shall include as a minimum the following:
      - One (1) network workstation.
      - One (1) 42" LED monitor for camera video display for alarm call-up.
      - One (1) 42" LED monitor for camera video display and multiplex viewing.
      - Two (2) 42" Overhead LED monitor for camera video display and multiplex viewing.

- The ~~Installer~~ Project Company shall provide any additional network workstations required to support monitors. All workstations provided in the Security Office shall be configured to function as a single integrated unit.

▪ Sheriff Deputy's Video Workstation

- Provide video workstation
- Viewing station shall include as a minimum the following:
  - One (1) network workstation.
  - One (1) 42" LED monitor for user selected camera video display and multiplex viewing of local areas.
  - Two (2) 42" overhead LED monitors for camera video display and multiplex viewing.
- The ~~Installer~~ Project Company shall provide any additional network workstations required to support monitors. All workstations provided in the secure enclosures as specified and configured to function as a single integrated unit.

▪ Network Switches

- Provide Network Switches.
- The Network switches shall provide wire speed switching to all ports.
- The Network switches shall provide a minimum of one gigabyte Ethernet for network backbones.
- Network switches connected to indoor fixed cameras shall support IEEE 802.3af Power-over-Ethernet.

○ System Function

▪ Map based Graphic User Interface (GUI)

▪ Menu Based Navigation

- The system shall provide pull down menus to allow quick access to camera selection, multiplexed view display, and configuration screens.

- Camera Selection
  - The user shall select a camera for display by clicking on the cameras icon or selecting the camera from a pull down menu.
  - Selecting a camera shall also display any control options available.
  - The system shall allow the user the option of hiding the rest of the graphical user interface to view the single camera video screen full screen.
- Multiplexed View Selection
  - The User shall select multiplexed views by first selecting a monitor then selecting a pre-programmed view from a drop down menu.
  - The user shall be capable of creating a custom multiplexed view by selecting a monitor, the number of camera, and the cameras to be displayed.
  - Selecting any single camera view in a Multiplex view shall switch that camera to a full screen view. The full screen view shall be displayed on the call-up monitor if this mode is enabled.
  - The system shall allow the user the option of hiding the rest of the graphical user interface to view the multiplexed video screen full screen.
- Auto Camera Call-Up
  - The system shall allow the user to assign any monitor for event driven automatic camera call-up.
  - Events shall include the following:
    - Door control
    - Intercom call
    - Camera motion detection
    - Video motion detection
  - The call-up monitor shall automatically switch to the programmed camera when an event is registered.

- The system shall be capable of supporting several call monitors and assigning camera to different monitors.
- The user shall be able to disable camera call-up. The system shall display a status icon when camera call up is disabled.

- PTZ Camera Control
  - The system shall display PTZ camera controls when PTZ cameras are selected.
  - The system shall provide mouse driven target selection controls, icon based control and traditional PTZ Keyboard control from same or compatible manufacturer as VSS system.
  - The following PTZ control icons shall be available
    - Up
    - Down
    - Right
    - Left
    - Zoom in
    - Zoom out
    - Auto focus
  - The system shall support preset views and auto panning.
  - The system shall support auto-switching between preset tour groups.
  - Presets, Auto Panning, and tours shall be selected from a drop down menu.
  - The system shall provide access to complete programming of menus embedded in the selected camera.
- Recorded Video Playback
  - The user shall access recorded video playback by selecting any camera.

- When a camera is the selected, the system shall display the option to view the recorded video for that camera.
- Selecting to enter the recorded video review mode shall display a full set of video control icons and icons for starting search functions.
- The video review mode shall permit the review of single full screen or multiplex video.

- Additional Features
  - Camera Labeling
    - The system shall allow individual camera labeling up to 16 characters.
    - The Server's cameras, microphones, and sensors can be named. Cameras can be setup as PTZ-type and full descriptions can be assigned.
  - System shall provide individual camera indication of the following:
    - Alarm indication
    - Video loss
    - Date and time
  - The system shall provide user-selectable recording modes including the following:
    - Continuous recording.
    - Event recording.
    - Sequential recording.
  - The system shall allow video search by the following categories:
    - Time
    - Date
    - Location
    - Event
    - Camera

- The system shall provide post image processing with the following features:
  - Digital zoom
  - Image enhancement
  - Contract
  - Brightness
- The system shall provide digital motion detection with the following user-selectable settings:
  - Zone size
  - Zone sensitivity
  - Number of pixels required to create an alarm condition
- The system shall provide remote camera configuration menus.
- The network video recording software shall support the following backup formats:
  - NAS
  - CD-R/RW
  - DVD+/-R/RW
  - External USB storage
- Network video recording software shall support full search capabilities of video stored on backup media.
- The network video recording software shall have the capability to assign a number and label to each camera as required by the County~~/State.~~
- ~~Installer~~ Project Company shall provide all required software for remote access of recorded and live video by any computer provided by the County~~/~~ ~~State~~ over the security network.
- System shall provide ability to provide site name and authorization established by User and Group. Permissions can be assigned for all system functions.

- IP Camera Alarm Processing
  - The system shall be capable of monitoring alarm points and motion detection built in the IP Cameras provided.
  - IP Camera inputs and monitoring point alarms shall be logged and annunciated by the system.
  - The system shall be capable of using camera motion detection and monitored contacts to triggering for the following features.

    Change frame rate to any cameras for duration of event.

    Mark recorded video as an alarm event.

    Initiate video call up.

    Trigger PTZ Preset, auto panning or tour.

    Send alarms to all workstation.
  - The system shall be capable of editing and deleting any monitoring or motion detection point.
- Video Authentication
  - The system shall provide Authentication marking for all archived video.
- The software shall employ a compression algorithm based on:
  - Optimized MPEG-4, MPJPEG, and/or H.264.
  - User selectable resolution (quality) not requiring a need to restart the application or the network video recorder. There shall be multiple levels of resolution with different levels of compression available.
- The software installed in both servers and workstations shall be similar in:
  - Graphical User Interface, therefore, an operator shall need to learn only one (1) interface for both control and programming of the system.
  - Functions offering the ability to remotely configure most system components from any recorder or workstation.

- Auxiliary Inputs and Audio Monitoring

  - The software shall offer features including the simultaneous display, playback, distribution, and archive of multiple channel video and audio. It shall collect multiple channels of analog video and digitize them for the purpose of display, archive, and requested distribution across the Ethernet network. Cameras, microphones, and sensors shall be the primary analog input devices.

    Each channel of video and audio data shall have the capability of being displayed, played back, distributed and archived simultaneously across several servers and clients across the network. Each sensor channel shall support a NO or NC device.

- User Management

  - The system shall be configured to control user access and rights through individual User Ids and User Groups.

  - The system shall require each user to log on to gain access to the system.

  - The login window shall consist of a User Name and Password field.

  - The system shall support an unlimited amount of User log-on Ids and User Groups.

  - Access rights can be granted to individual users or entire user groups.

  - The software shall allow for each group to be authorized or denied access, per component, to:

    - Log-in
    - Log-out
    - Set-Up
    - Network Setup & Site Name
    - User and Group Management
    - Auto Login
    - Macro – Create & Edit

- Alarm Setup
- Authentication Settings
- Device Setup
- Pre & Post Alarm
- Storage Database Utilities
- Auto Record
- Exit to OS
- RS-232 and/or Ethernet Setup
- Priority Setup
- Registration Setup
- Manual Record Setup
- Reports
- Scheduler/Macro
- Shutdown/Close
- Record
- Stop
- Change Quality
- Picture
- Export
- Print
- Controls
- Live View
- Playback
- PTZ

        - Access to all programming menus

    - System Scheduling

        - The system shall be capable of automatically adjusting system setting via a scheduling interface.

        - The scheduling interface shall control the following features:

            - Recording settings by individual camera
            - Monitor Configuration
            - Alarm notification
            - Camera tours
            - System backup
            - User access
            - Alarm notifications

Digital Video Network Workstations and Network Video Recorder

- The Workstation shall be a ~~state-of-the-art~~ PC computer running Windows 7. It shall be fully equipped with the Digital Video Recording and Network Software. The workstation shall include at minimum a 22" monitor.

- The Workstation shall have a 400 watt power supply using a current generation Intel® Core i7 processor or greater. It shall have a minimum of 8 GB of RAM memory, a 1 TB hard drive, CD/DVD-R/RW drive, a Gigabyte Ethernet interface, a Triple Output Graphics Adapter using a current generation NVidia or Radeon video card with minimum 2 GB GDDR dedicated video memory, minimum 512 Graphics Cores, minimum 80 Gbps memory bandwidth or greater and additional case fan cooling. The Workstation shall be equipped with a standard USB, optical wheel mouse and Microsoft-compatible keyboard .12 ectors available on the back panel. It shall also be operated indoors in a temperature range not to exceed 40º to 95ºF (5º to 35ºC) and a humidity range not to exceed 8 to 85% relative, in a non-condensing atmosphere. The Workstation shall employ a Universal Voltage Power Supply requiring 105 – 240 VAC @ 50 – 60 Hz.

RAID Disk Array/Storage System

- The RAID storage system shall be an iSCSI data storage unit suitable for any Digital Video Recording System. The RAID shall be compact and rack mountable making it suitable for any installation that requires high-capacity storage with a small footprint. The system shall provide sufficient storage space to hold the amount of video listed previously under “Video Storage Capacity”.

- The RAID storage system shall support at a minimum the use of 12 Serial ATA 6Gbps (SATA-III) Hard Drives with a minimum capacity of 1 TB each in a RAID 5 or RAID 6 configuration. The RAID system shall have dual, redundant power supplies and dual gigabyte Ethernet ports. All drives shall be “hot-swappable,” allowing removal and installation of the drives without powering down the array.

- The RAID storage system shall be mounted in an industry standard 19" (483 mm) rack.

Network Switches

- The Access Layer Switches for the Security Network shall meet all of the following specifications and have all of the following capabilities:
    - Rack mounted
    - 10/100/1,000 rated full duplex auto MDI/X access ports with full wire speed non-blocking switch fabric, sized according to the number of outlets required for the network. No more than 80% of access ports shall be populated at initial startup.
    - Four (4) 1 Gbps SFP uplink ports with one (1) 1 Gbps fiber transceivers populated.
    - 802.3af and 802.at PoE and PoE+ support for full rated 15w PoE on every port as required.
    - Full duplex link aggregation of at minimum 4 links
    - Fixed configuration stackable design
    - OSI model layer 2 switching with configurable management addresses.
    - IPv4 with support for simultaneous IPv6 operation
    - At minimum, 255 independent VLANs with Voice VLAN
    - At minimum, four (4) hardware egress queues per port
    - QoS and CoS

- Remote management and configuration
- IGMP Snooping with at minimum 255 IGMP groups
- The following security and authentication protocols: 802.1X, RADIUS, Port Security, DHCP Snooping, Dynamic ARP Inspection, Port-based Access Control Lists, SSHv2, SNMPv3, BPDU Guard, and Root Guard.
- Rapid Spanning Tree Protocol and Multiple Spanning Tree Protocol
- Support for, or in the case of layer 3 protocols the ability to work with, all protocols necessary for the entire network, including but not limited to: TCP/IP, UDP, IPX/SPX, TFTP, Telnet, RMON, LACP, 802.1D, 802.1P, 802.1Q, NTP, and all corresponding protocol versions for IPv6 support.

Security Network Core Switches

- The Core Switches for the Security Network shall meet all of the following specifications and have all of the following capabilities:
  - Rack mounted
  - Modular configuration with six (6) module slots populated with supervisor engine, 1G bps fiber modules, and 1 Gbps copper modules, as required.
  - 10/100/1,000 rated full duplex auto MDI/X access ports with full wire speed non-blocking switch fabric and supervisor engines, sized according to the number of outlets required for the network. No more than 80% of access ports shall be populated at initial startup
  - 1 Gbps fiber transceivers populated for all connections to access layer switches. No more than 80% of ports shall be populated at initial startup. Provide additional modules as required.
  - 802.3 af and 802 at PoE and PoE+ support for at least full rated 15w PoE on every port as required.
  - Full duplex link aggregation of at minimum 4 links
  - OSI model layer 2/3/4 express forwarding
  - IPv4 with support for simultaneous IPv6 operation
  - All industry standard dynamic routing protocols including but not limited to: OSPF, RIPv2, OSPFv3, and RIPng.

- Policy-based Routing
- IP Multi-cast routing protocols including but not limited to: PIM-SM, SSM, and DVMRP.
- At minimum, 4096 independent VLANs with Voice VLAN and Private and Promiscuous ports.
- Inter-VLAN Routing
- At minimum, four (4) hardware egress queues per port.
- All QoS capabilities including but not limited to the following: per-port QoS, per-port per-VLAN QoS, Strict Priority Queuing, DSCP and ToS classification, input and output policing, congestion avoidance.
- Remote management and configuration
- Full multi-cast support including IGMP Snooping with at minimum 16,000 IGMP groups and multi-cast routing with at minimum 32,000 multi-cast routes.
- The following security and authentication protocols: 802.1X, RADIUS, Port Security, IP Source Guard, DHCP Snooping, Dynamic ARP Inspection, Port-based Access Control Lists, SSHv2, SNMPv3, BPDU Guard, Root Guard, RACLs, VACLs, PACLs, PVLANs, and Control Plane Policing.
- Rapid Spanning Tree Protocol and Multiple Spanning Tree Protocol with PortFast, UplinkFast, and BackboneFast.
- Support for all protocols necessary for entire network functionality including but not limited to: TCP/IP, UDP, IPX/SPX, TFTP, Telnet, RMON, LACP, 802.1D, 802.1P, 802.1Q, NTP, HSRP/VRRP/GLBP, and all corresponding protocol and standard versions for IPv6 support.
- Additional Redundancy equipment and protocols as follows: redundant power supplies, hot-swappable port modules, hot-swappable transceivers, hot-swappable supervisor engines.

Fiber Optics

- Cables
  - Provide multi-mode fiber optic cables as required to meet system requirements.

  - Fiber optic cable shall be utilized to transmit video signals from outdoor cameras to either the Main Security Equipment Room or additional Security Equipment Rooms. Fiber optic cable shall also be utilized to transmit video signals of cameras from additional Security Equipment Rooms to Main Security Equipment Room.
  - Aerial and underground fiber optic cable shall contain a steel armor/polyethylene over jacket construction for rodent and lightning protection.
  - Cable shall be listed suitable for direct burial and aerial applications.
  - Provide fiber strand quantities as required.
- Fiber-To-Ethernet and Ethernet-to-Fiber Media Converters:
  - Provide all fiber optic transmission equipment as required to connect exterior camera equipment with the following characteristics or features:
    - SFP+ Ports: Minimum one 1 Gigabyte SFP+ (small form-factor pluggable plus).
    - Ethernet Ports: Minimum one RJ45 Ethernet port.
    - Unit design: Environmentally hardened.

Category-6 Distribution Cable

- Provide category-6 distribution cable for connecting all field devices and outlets to the nearest associated access switch.
- Cable shall be Category-6 rated, unshielded twisted pair (UTP) cabling.
- Cable shall support minimum 1,000 Mbps data communication.
- All Category-6 distribution cables specific to security outlets and devices shall have a green colored jacket.
- Cable shall meet or exceed EIA/TIA 568-B.2-1 Category-6 standards.
- Cable shall be riser or plenum rated as required.

Camera Power and Audio Cables

- All cable shall be terminated and labeled.

- Provide cabling for camera power. The ~~Installer~~ Project Company shall provide connectors and connections of all power cable as required for a fully functional system.
- The ~~Installer~~ Project Company shall be responsible to verify and resolve all Video surveillance system ground loops, and asynchrony.
- Cabling Shall meet the following requirements:
    - 24 Volt AC Power – Shall be stranded, non-shielded, PVC jacketed, 2 conductor, 18 gauge.

Camera Power Supplies

- Provide power supplies as required for Video Surveillance equipment.
- The power supplies shall be available in several sizes and input/output configurations for specific application from power calculations. Power supplies shall be available in NEMA4 rated enclosures as a complete package available from the manufacturer. Sizes are as follows:
    - 24 VAC, 4 fused outputs: 4A, 7.25A, or 12.5A.
    - 24 VAC, 8 fused outputs: 4A, 7.25A, 12.5A, or 25A.
    - 24 VAC, 16 fused outputs: 8A, 14.5A, or 25A.
    - 24 VAC, 32 fused outputs @ 14.5A.
- The power supplies shall be Class 2 limited current outputs.
- The ~~Installer~~ Project Company shall size and select the power supply based on requirement calculations including the load of the cameras, camera housing, fiber converters, and video subsystem support equipment selected.
- The power supply shall be sized 20% over the required load.
- All camera power supplies shall be housed in an oversized cabinet to provide ample room for wiring fiber converters and connections, and tamper resistant.
- The power supplies shall be UL-listed and approved.
- All cable penetrations into the NEMA4 power supply enclosure shall be watertight. HUBs and UF connectors shall be incorporated to maintain the watertight rating on the complete assembly.

Installation

- All equipment shall be installed per the requirements of the manufacturers.
- All equipment shall be utilized for the purpose for which it was designed and manufactured.
- All cameras shall be installed at the locations as outlined. Field adjustments shall be made as required to provide the field of view of the area to be monitored.
- Electric power and power supplies shall be provided for all equipment as required and supplies shall have the performance characteristics compatible with the unique requirements of the equipment being supplied. Power supplies shall be loaded to a maximum of 60% of the rated power output.
- All surface mounted conduit and infrastructure shall be painted to match mounting surface as directed by the County~~/State~~.

System Setup

- The Systems ~~Installer~~ Project Company shall be responsible for the setup and programming of the security system.
- All Video Surveillance camera viewing areas and focus shall be as directed by the County/ State.
- The network digital video recorder shall be completely programmed. All fields shall be set as directed by the County. ~~/State~~
- A manufacturer's representative shall be on site during final screen setup and programming of the digital recorder.

Field Quality Control

- Verify, prior to installation of enclosures, that field of view of camera is not obstructed. If such conflicts occur, coordinate with ~~Contracting Office~~ County's representative prior to installation.

5.5 Detention Controls and Monitoring System

System Description

- The system shall control, annunciate and monitor all Security and Communication special system points via Security Office operator stations as outlined and support the functions as described herein and in the Security and Communication Systems.

- The Control System shall consist of a multi-tier design of networked PLCs with dual processors and redundant power supplies, and Touchscreen Computers (TSC) workstations with Graphical User Interfaces (GUI). There shall be two (2) TSC workstations at the Security Office. All remote PLCs and TSC shall be networked through a fiber optic Ethernet network. Provide a security server for storing all of the data and programs for each of the PLCs and TSC on the security network. The Control System shall be interfaced to the Access Control System, Duress System, Video Surveillance System, Gate Arms, and Intercom/Paging System for a fully integrated Control System.

- Refer to all sections for additional requirements. Provide all devices necessary including hard disks, removable backup disk driver, printer, necessary power supplies and batteries, interfaces, software, and miscellaneous wire, connectors, to meet all the functions and features as described.

- Provide server grade workstation computers for Control Room workstation. The workstation computer shall include 27" LCD touchscreen monitor, wireless optical mouse and keyboard.

- Provide Programmable Logic Control (PLC) system including all remote PLCs or Remote Input Output Units networked to the master PLC for control and monitoring of selected doors, intercom control and integration, gate arm control, access control, integration of VSS and duress alarms via the Control Center.

    - Provide Central Processing Unit (CPU), power supplies and batteries, input and output modules, specialty interfaces, communication modules, software, and miscellaneous wire, connectors, to meet all the functions and features as described.

- The PLC shall contain supervised type communication circuits as required to control and monitor any/all special system devices located throughout the Project Site.

- Provide all control networking hardware and software including all Ethernet interfaces, switches, hubs, UTP, fiber optic cables, and miscellaneous distribution hardware.

- Provide all necessary software and programming including operating system hardware, application, PLC and supervisory (SCADA) software.

Security & Communications (SC) - Systems Response Times

- Call-in/Call-up Response Time: The Security Systems including central processing, input/output and peripheral equipment shall provide a call-up response time of max. 1.0 second. The call-up response time shall be defined from the time an intercom station is activated to the time the control consoles display the indicating signals and video associated, and allow the operators to verify identity and local conditions in response to the call-up.

- Control Response Time: The Security Systems including central processing, input/output and peripheral equipment shall provide a control response time of max. 0.1 second. The control response time shall be defined from the time an operator activates a control switch to the time the controlled peripheral device executes the command such as unlocking of a particular door.

- Supervisory/Trouble Response Time: The “SC” systems shall provide a supervisory response time of max. 1.0 second defined similarly to Alarm Response Times specified above.

- "Acknowledge" and "Authorize Interlock Override" (AIO) Response Times: The “SC” systems shall provide an "AIO" response time of max. 0.5 seconds from the time the particular switch is depressed to the time the control consoles and “SC” is ready to execute a subsequent command.

- Reset Response Time: The “SC” systems shall provide a reset response time of max. 3 seconds. The reset response time shall be defined from the time the reset button is depressed to the time the systems restart in fail-secure mode and the consoles are ready to execute a subsequent command.

- Disaster Recovery Time: The “SC” systems shall provide a disaster response time of 240 seconds. The disaster recovery time shall be defined from the time the systems start-up following a complete database, application program and operating system failure. When the systems are recovered all functions shall be fully operational at all control consoles.

Programmable Logic Controller - Subsystems

- Provide a Central PLC System that shall comprise of two (2) redundant CPUs and two (2) redundant power supplies. One (1) CPU and power supply shall be active while the second CPU and power supply are on standby. There shall be a duplex module that switches automatically to the standby units if any errors are detected in the active unit.

- Provide all necessary expansion racks and power supplies to support all the necessary I/O, PLC modules and interposing relays for this project.

- Provide all necessary PLC Ethernet and communication modules to network all the PLC together and communicate with all subsystems that shall be integrated into the Control System such as VSS, Access Control, Intercom and Wireless Duress.

- Door/Gate Control and Monitoring

    - Definitions

        - The following definitions of functions or indications shall apply to the descriptions contained herein.

1)	"Secure"	The door/gate is closed and locked. This is effected by monitoring the series connection of the latch bolt monitor switch and the door position switch.
2)	"Locked"	The status of a locking device when the latch bolt is fully extended. The device shall not be locked until the door/gate is closed.
3)	"Open"	The door/gate is "Open"/"NOT Secure".
4)	"Unlocked"	The status of a locking device when the latch bolt is partially or fully retracted.
5)	"Lock"	Control power is removed from the locking device as required to effect a "locked" mode. The nature of the locking signal or sequence is determined by the specific locking device. The description above applies to "Fail-Secure" locking devices.
6)	"Unlock"	Control power is applied to the locking device in an "unlocked" mode. Control may be by momentary or continuous application of power as dictated by the locking device.
7)	"Reset"	Activation of the "Reset" function shall place all locks in the emergency group in the locked mode. Doors may not be secured until they are physically closed as dictated by the specific locking device.
8)	"Interlock"	Interlocked doors shall be controlled so that only a single door in the interlocked group can be electrically opened at one time. The systems shall include controls, connections, and programming required for "controls interlock", "monitoring signals interlock", and "acknowledge/bypass interlock violation". The activation of the "acknowledge/bypass interlock violation" shall allow the control center operator to control all doors operating in a "monitoring signals interlock" mode. The control console shall include a security code protected "OVERRIDE-CONTROLS INTERLOCK" switch.
9)	"Manual Override"	All doors and gates shall include manual override via keys. Typically, all doors and gates shall be operable by officers assigned for operating at a particular door/gate. All signaling functions shall be enabled during manual operations.

Door Control and Monitoring System Functional Description

- The control of all electrically operated doors shall be through reliable, factory tested controllers with a documented Mean Time Before/ Between Failure (MTBF) of minimum 50,000 hours of operation. The controllers may be relay or programmable logic based units.
- The system shall provide supervision of equipment and wiring. System equipment and wiring tamper, trouble and alarm signals shall be annunciated at the Detention Control System Computer.
- All doors shall be controlled from Master Control Center. All equipment shall be installed in maximum-security metallic consoles and enclosures.
- All power necessary for the Door Control and Monitoring System shall be connected through uninterruptible power supply and emergency generator.

- Provide materials, labor, equipment, and services necessary for a complete Door/Gate Control and Monitoring (DCM) System as specified in this Section. The ~~Installer~~ Project Company shall provide all interfacing and integration work required for complete and functional systems.
- Provide cabling through new conduits as required to connect all door/gate control and monitoring devices shown on the Contract Documents.
- The following is a general diagrammatic description of work to be provided by the ~~Installer~~ Project Company:
  - "CONTROL INTERLOCKING" - control and monitoring from Master Control Center for:
    - Vehicle Sally Port
    - Secured Vestibules
    - Selected Corridors Doors
    - Elevator Control
- The Door/Gate Control and Intrusion Detection System functions shall be implemented by interfacing and integration of the following systems:
  - Door hardware, control, and monitoring devices and systems.

        - Programmable Logic Control (PLC) - Input/Output (I/O) Units for door control and monitoring required for all door devices required for this project.
        - Networked TCS workstation computers.
        - Intercom and Paging System - As required to identify the location of intercom calling stations and associated doors, through signaling symbols.
        - Gate arms, loops, and integration to access control and PLC systems.
        - Access Control System and miscellaneous associated devices.
    - Provide global/group controls for emergency unlocking of doors, separately for each sally port. Provide audible and visual adjustable time type "Reminder/ Warning" signals at all times when the emergency unlocking function is enabled. Provide programming and control functions for selective group control and signaling as coordinated with County~~/State~~ and Project Company ~~Architect & Engineer.~~

- Video Surveillance System (VSS)
    - Systems Selection and Control through network connectivity to the VSS control computer and the video management system.
    - Video Surveillance System - Manual Control.
- Video Intercom/Paging through Network Connectivity to Video Intercom Paging Headend
    - Video Station/substation selection
    - Paging zone control
    - Page exterior/interior
    - All Page Center Control
- Duress Alarms
    - Duress Alarm displayed on TSC GUI screens

Description of Work

- Provide site-wide security and control systems hardware and software and programming as required for the systems to operate as specified in this section. Provide programming, start-up, testing, debugging through the control computers, programmable logic controllers, touch control systems, Access Control System computers and printers.

- Provide systems integration work for complete and functional integrated Security and Control Systems that operate in compliance with the sample generalized sequences of operation described in this section. These generalized operation sequences shall be used by the ~~Installer~~ Project Company in the development of the technical proposal and systems programming for hardware and software demonstration. The ~~Installer~~ Project Company shall coordinate with the County/State as required to implement requirements identified through the demonstration, and to provide final operation sequence that is acceptable.

- The Operation Sequences shall apply to all Touchscreen Computer Systems', GUI mouse driven screen computer systems', and Access Control System's user interface where applicable for Detention Movement Control workstation.

- Provide key plan display that shows a small scale plan of the facility, indicating the associated floor from the workstation's home orientation, with the area currently being viewed highlighted in red. Touching or pointing and clicking highlighted key plan areas shall provide operator the full plan screen of the selected area.

- Provide easy navigational tools such as arrows, icons that change screens to adjacent view in direction indicated by arrow.

- All touchscreen icons and functions shall also be activated by a wireless mouse or keyboard functions.

- Provide system control area to TSC GUI screens as outlined in the Contract Documents.

- Provide status message and alarm message display areas on TSC GUI screens with scrolling control icons.

- Provide audible, as well as visual, indication for all alarm conditions.

- Provide login screen or security log-on keypad.

- Label all cells, controlled doors, gates, areas, elevators and devices being controlled. Coordinate all numbers and designations with the County~~/State~~ and Project Company ~~A&E~~. Minor adjustments to GUI screens designation through startup and warranty period shall be at no cost to the County~~/State~~.

- Provide all special function pop up screens, PTZ, VSS control, multiplexer monitor control, video intercom, emergency release, interlock and interlock override functions, gate arm control, loop overrides, and miscellaneous control functions.

- Provide all report generation screens including alarm reports, incident reports, response reports and custom data logging reports with all necessary search, printout and archiving utilities.

- Provide console duress function. This shall be accomplished by either an icon or hardwire duress switch. Activating this function shall disable this local console and transfer control of its devices to the Detention Control System computer.

- Provide emergency group release, selected group assign and release functions. Coordinate these functions with County~~/State~~'s security team for which control stations have these functions. Emergency group release is typically for Detention Control System computer. Highlight doors in the path of egress that emergency release shall control. A confirmation and an abort function shall be provided.

- All wired and wireless duress devices shall be displayed on the appropriate GUI screen where the activation device is located.

- Touch Control Terminals - Hardware, Firmware, Software: The "TOUCH CONTROL SYSTEM (TCS)," shall be equipped with all hardware necessary to meet the following minimum performance requirements listed as follows:

    - Monitor, display and control all systems, functions and signals as specified.

    - Provide a signal generation to signal display and control to execution time response better than one (1) second including associated graphic maps and control displays associated with each type of signal and action specified. Typically the graphic maps displayed with each signal shall provide all details, labeling and control areas necessary and applicable to display and control the active system as described herein.

    - Provide hardware, firmware, software, and programming necessary to maintain and meet the response time, performance, reliability and operational requirements.

Touch Control Systems - System Description

- Provide interfacing and programming for "TOUCH CONTROL SYSTEMS (TCS)" and distributed processing equipment to meet the following minimum performance requirements:

- Provide for password based control console operator access (minimum of three levels). Coordinate with County~~/State~~ all password levels and privileges.

- Activation of two or more touch control areas within one second shall have no effect to any system. Provide timed sequence type controls for critical functions.

- Activation of the touch control system lockout function shall deactivate the TCS until the operator accesses the control station by using an authorized password. The time interval necessary for completely operational state of a terminal shall be three seconds maximum from the time of entering a complete system password via the appropriate text terminal.

- An incoming signal shall cause the appropriate system designated symbol in the system selection and control area to flash. Flashing shall be interpreted as a change of the color brightness unless specifically stated otherwise.

- TCS terminal shall provide for answering incoming or active signal.

- Control systems shall assist the operator in answering an incoming signal by flashing the applicable control function related areas and indicating any interconnections and relations between systems in the sequence specified and appropriate related systems.

- Control systems shall display individual status related statistics such as zone or area number of alarm, supervisory, trouble, queued signals in the touch control systems status display area.

- Queued signal shall be returned to the console/operator station which issued the queuing request after an adjustable time interval. If the terminal which issued the queuing request is in a lockout mode or is otherwise inaccessible to the control systems, the queued signal shall be sent along with a sequential description/tally to the other terminals or the other operator station (coordinate with the County/ ~~State~~). The description/tally shall indicate as minimum:

    - Time, date of origination
    - System, type of signal and device
    - Monitoring point
    - Operator station which originally answered the signal
    - Operator actions related to the signal

- Activation of a general alarm, systems control function such as acknowledge, test, access, queue and reset shall change a flashing colored control area to a steady control area display consistent with system specific color code.

- Selection and activation of system controls such as door or gate control, access control card readers, duress, video surveillance, paging, intercoms, inmate telephones, plumbing utilities, holding lighting control and control points, zones and areas shall be via site or floor graphic maps unless specific control functions require special commands as specified and as directed by County~~/State~~ and ~~A/E~~ Project Company. All system specific control sequences shall be typed as specified for the particular system.

- Activation of graphic display touch control area shall provide for the control area color to flash until the appropriate graphic display is completed at which time a steady bright color shall be displayed.

- The touch control system terminal shall provide for manual access of any system through the systems selection and control menu displayed at all times when a particular terminal is active. All systems related manual access shall require two steps.

  - First, touch control area activation - cause the respective touch control area to flash and the word “manual” to be displayed under the control area.

  - Second, touch control area activation - cause the display of particular system related control and classification menus and site plan.

- Manual access of door or gate and intercom control functions shall cause the same Video Surveillance display and control functions as described for automatic call-up.

- Manual access of Video Surveillance system control functions shall be as described in this Section under the appropriate system operation part.

- Manual activation of paging intercom and door/gate control keys in the system selection and control menu shall automatically engage the intercom and paging menu.

- Activation of the site key plan graphic control key in the system selection and control menu shall provide for the site plan to be displayed on the entire screen area above the system selection and control menu. An incoming signal shall provide for the display of the appropriate sector/ quadrant map and activation of the graphic display control menu to allow the operator to perform a closer inspection of the signal origination area.

Provide direct one step access to different sectors/areas of the Site and to buildings through a hyper graphic key plan. Provide direct one step access to the complete Site plan through a dedicated icon/graphic button. Identify the location of each control console on the graphic display.

- Activation of the clear screen key in the systems selection and control menu shall allow the operator to blank a terminal temporarily. Incoming signal addressed to the particular terminal shall activate necessary monitoring, display and control function associated with the particular terminal. Activation of the clear screen shall have no effect while active signals are addressed to the terminal unless a system error condition validates its action. If clear screen function is validated, all active signals shall be automatically transferred to the other operator terminal or terminals as necessary to provide for operators to respond as required.

- Activation of the touch control system test key in the systems selection and control menu shall provide for the respective touch control system to run through a complete diagnostic and provide a plain English report of the results. Activation of the system test key while active signals are addressed to the terminal shall have no effect.

- Activation of the cancel command key in the system selection and control menu shall stop execution of the last command and return all systems to their status prior to issuance of the command. The system shall display and announce any potential danger associated with the cancellation of the command. For example, closing a gate while people attempt to pass through. The systems shall require the cancel command to be activated for the second time within three seconds if the cancellation of a command would place people in danger. The cancel command key shall provide the operator to cancel one command within ten seconds interval.

- Activation of the touch control system reset key in the system selection and control menu shall provide for the respective touch control system to reset, run a complete diagnostic, and provide a plain English report of the results. Activation of the touch control system reset key while active systems are addressed to the terminal shall have no effect; the signals addressed to the particular terminal shall be transferred to a different terminal for the touch control system reset key to become active.

- Typical Touch Control Screen Configurations: The touch control system through the PLC system shall process and display, as a minimum, the Graphical User Interface (GUI) type systems control and monitoring terminal configurations listed below:

  - Door/Gate Control

    - Systems Selection and Control

        - Door/Gate Alarm, and Video Surveillance Camera Automatic Call-up
        - Card Reader Monitoring, Logging, and Reporting
        - Signal Classification
        - Door/Gate, Graphic Map Display and Control for Intercom, and Paging Systems
        - Report Generation with repeated updating of data regarding dispatching of incident response teams, the actions, and findings of the incident response teams and operators, and security and maintenance follow-up required. Each event update shall include date, time, operator identified - maximum security alert operating mode only.
        - Emergency and Group Release
        - Interlock Override
    - Video Surveillance System (VSS)
        - Systems Selection and Control
        - Video Surveillance - Manual Control
    - Video Intercom/Paging
        - Video Station/substation selection
        - Paging zone control
        - All Page Center Control
    - Duress Alarms
        - Duress alarms displayed on all GUI screens
- Touch Control and Graphics - Default Color Selection
    - Use the following color rules for establishing color combinations that provide good contrast and visibility:

a.	Overall Screen Background	Light Gray/White
b.	Control Area Symbol Outlines/Contour/ Frames, Labels /Text	Black
c.	Label and Symbol Display Area	White
d.	Interconnect Label Area	Yellow

Use the following color rules for establishing systems selection and control menu touch control foreground area colors:

a.	Perimeter	Pink
b.	Door/Gate Control	Blue
c.	VSS Surveillance	Green
d.	Intercom and Paging/Audio Com	Magenta
e.	Graphic Annunciator	Green/Red/Amber
f.	Clear Screen	Blue
g.	Touch Control System Test	Orange
h.	Cancel Command	Red
i.	Touch Control System Reset	Red
j.	Touch Control System Lockout	Magenta

System control standard or default foreground area colors are:

a.	Acknowledge	Magenta
b.	Test	Orange
c.	Access	Cyan
d.	Queue	Blue
e.	Reset	Red

Signal classification control standard or default foreground area colors are:

a.	Unknown	Magenta
b.	Accidental False	Cyan
c.	Deliberate False	Blue
d.	Real	Red

Symbol standard or default colors are:

a.	Perimeter	Magenta
b.	Motion Detection	Black
c.	Door/Gate Control	Black
d.	VSS Surveillance	Green
e.	Intercom and Paging/Audio Com	Blue
f.	Lighting/Utilities	Orange

- Where touch control area foreground colors are not established, the ~~Installer~~ Project Company shall develop the coloring scheme based on use of alternating colors such as red, orange, green, blue, magenta and cyan.

- Overall contrast, brightness shall be adjustable to provide operators with graphics which are distinctive for particular signals and can clearly be seen in the lighting conditions of the control center.

- Graphics, color combinations, and systems adjustments shall be developed by the touch control systems manufacturer and confirmed with the County~~/State~~.

- Graphics and symbols developed for the touch control systems shall be to allow a color blind operator to recognize a function or control area without knowing precisely which color corresponds to which command or signal.

- Flashing signals shall be outside of labeling and other text areas and flashing signals shall determine variation of screen area brightness without actually blanking out an area or removing a graphics from a control area.

- Integrated Special Systems – Priority Levels

  - When two or more systems send signals to the operator stations, the following priority list shall be used in establishing the order in which they are displayed and controlled via GUI touch control terminals and graphic control panels.

a.	Staff duress signal	Priority 1 - Highest
b.	Cell Door/Gate Control, Video Intercom	Priority 2
c.	Perimeter, Motion Detection, VSS alarms, Perimeter Doors	Priority 3
d.	Other	Priority 4

Sequences of Operation

- Sequences of Operation described in this Section are generalized representative samples which shall be used for development of the submittals. Provide programming of final operation sequences to include all requirements coordinated and finalized through the system demonstration and final acceptance testing process.

System Operation - Standard for Touch Control Systems

- Provide systems that are programmable to include alarm, trouble and supervisory signal as EXCEPTION/CRITICAL EVENTS. The Touch Control System terminals shall allow the Control Center to operate in Degraded mode with no report filing requirements, MAXIMUM SECURITY/ALERT MODE where report filing is required for critical events and any mode combinations for each system (between degraded and maximum alert mode) as required by County~~/State during final acceptance testing~~. The SEQUENCES OF OPERATION included in this section are provided as guidelines to develop all sequences required for this Project.

- Movement Control - Operation Sequence: When multiple intercom calls/door, gate access requests are placed the operator shall perform the tasks listed below.

    - Select intercom station on the touch screen - establish voice and video communication.

    - Unlock the door (unlock and open the gate) by touching the icon on the touch screen.

        - Where VSS is provided, the camera displayed shall change when a new intercom or camera is selected through the touch screen or keyboards.

    - All card reader controlled doors shall be monitored for status and status of door shall be displayed on GUI screens. Unauthorized access shall cause an Alarm condition at the local station as well as the Detention Control System Computer. PLC based card reader controlled doors shall have the capability to be overridden by local control with proper pass word protection or Detention Control System Computer.

- Video Security Surveillance (VSS) System

    - TCS, Computer, PLC, and VSS systems shall be integrated to provide for automatic and manual operation of the VSS system.

    - VSS normal default operating mode shall be automatic as described.

    - When operators desire to control the VSS system in a manner different than the automatic functions, they shall be provided with necessary manual control functions for the following:

        - Selection and control of cameras

        - Selection of display location for each camera and each recorded video signal

        - Selection of display configurations for each monitor
        - Selection of recording and replay conditions and configurations
    - VSS manual control functions shall allow the County~~/State~~ to change system configuration for both automatic and manual modes and menus.
    - Automatic and manual operation, preset, and default settings, signal sequencing, function assignments, and other operational and programming requirements shall be as described.
    - Manual menus shall control how video image, being received from any VSS camera installed is displayed on the monitors that are installed in the control center. Cameras that are equipped with pan, tilt and zoom features are also controlled from these menus.
- Door/Intercom Control Systems
    - Traffic Control Menu: Controls traffic passing through controlled doors, and monitors their surrounding area by manipulating associated intercom and video surveillance (VSS) systems, retracting (unlocking) lock mechanisms and monitoring status (unlocking) lock mechanisms and monitoring the status (Unlocked/Locked) of doors.
    - Lock mechanism installed on each door and its associated intercom and VSS camera are controlled by the following:
        - Control area next to each door labeled with a KEY symbol provides control of lock mechanism on a particular door. Visual indication of door status (Unlocked/Locked) is provided by color of the KEY and DOOR symbols respectively where KEY symbol illuminated - unlocked, door symbol dimmed - closed and locked. The word "UNSECURE" shall be displayed in the status display area whenever a door is open, unlocked or both open and unlocked.
        - Switch labeled READY controls power to door control areas. Visual indication of power status is indicated by a steady control area color indicating Power On, a dimmed color indicating power off. This control area has no affect on the visual indication of the door status.
        - Control area and symbol labeled with door associated intercom station number, controls associated intercom and VSS camera operations. The control area color indicates addressing via illuminated color, off via dimmed color signal receiving from the intercom station via flashing color.

        - Single control area on the graphic map bottom right corner labeled TOUCH TO TALK controls that function for all of the intercom circuits are individually activated by intercom/VSS control areas.

            - Although CPS is equipped with automatic talk/listen circuitry for normal intercom conversation, the control shall manually override the automatic talk/listen circuitry. It shall only be necessary to use this manual override, if there is loud background noise at a particular door or a malfunction in the automatic talk/listen circuitry.

    - When intercom/VSS communications are not in progress with doors, associated colors are dimmed. To initiate an intercom call to a particular door, the following shall occur:

        - If appropriate hands-free intercom master station or handset at a particular console operator station has not been activated, procedures above are followed.

        - If any single intercom/VSS control area is touched and released, its associated color illuminates steadily, audio is received in activated station or handset via the intercom associated with door named on the graphic map; associated VSS display(s), appear(s) on console monitor(s).

        - Normal conversation shall be possible; however, if the automatic talk/listen circuitry is not functioning satisfactorily, the touch to talk control area is touched and maintaining pressure on it while speaking into the wireless headset or handset transmits audio to the active door intercom station. When pressure is released from the TOUCH TO TALK control area, audio from the same door is again received in the headset or handset.

- Door Emergency Release (at Detainee Movement Control)

    - Activating the emergency release icons shall switch the view to the primary emergency release screen which contain the Primary “Enable” switch, an Emergency Release Cancel switch and switches to view the graphic maps of the facility

        - Activating the “Enable” switch within 3 seconds shall arm the system for Emergency Release and shall display a confirmation prompt “Are You Sure?" After selecting “Yes” icons for the group shall appear on the facility map. An audible tone shall sound every 4 seconds while the system is armed.

        - While armed activating a group release icon, emergency release door switch or a normally controlled door switch shall unlock the door or doors associated with that switch and the doors shall remain unlocked until reset. A Reset icon shall appear and activating the icon shall set the associated lock/locks to the locked conditions.

        - Activation of the cancel function shall disarm the “Emergency Release" function cancel the audible tone, and reset and lock all doors opened by Emergency Release function.

- Interlock/Interlock Override

    - Anytime an attempt is made to open a door that is interlocked with another door, an “Interlock” indication shall be displayed on the screen. “Interlock Override” allows two interlocked doors to be opened at the same time. Activating the “INTERLOCK OVERRIDE” icon and then within 4 seconds selecting the door (or doors) to be opened shall execute the function.

- Low Level Lighting Control

    - Provide GUI Control icons and menus for the following:

        - All cell lighting and selected corridors.

    - Coordinate local control and power requirements with Project Company. ~~Electrical Installer~~

- Miscellaneous

    - Activating the “Panel Disable” icon shall render the terminal inoperative. The screen shall be blank except for the words “PANEL DISABLED.” An alarm shall be generated at Detention Control System computer and all control functions shall be transferred to Detention Control System computer. The panel shall remain inoperative until control capabilities are returned by Central Control. When control is returned by Central Control, the “LOG-IN” screen shall be displayed at the remote terminal.

    - Activating the “Panel Control” icon shall switch the display to the “Panel Control” screen. This screen allows the operator to see the status of all control panels, take control of panels, and restore control of panels. The screen shall list each control panel, the status of each control panel (normal, transferred, disabled, or taken over) and display the appropriate control icons based upon a panel’s status.

- Activating the “LOG OFF” icon shall switch control of all panel functions to the designated transfer control station and cause the “LOG IN” screen to be displayed. Control can be returned to the panel by entering a valid log-in code; no action is required by the station to which the panel was transferred.

- Activating the “MAIN SCREEN” icon shall switch the display to the control consoles primary control screen, which is typically the screen that shows the control points immediately surrounding the control room or console.

- Activating one of the area icons shall switch the display to the control screen for that area. If the area has been taken over, control functions may be executed. If the area has not been taken over, the area may only be viewed. The area icons for any areas containing active or acknowledged alarms shall be red; the area icons for any areas containing shunted alarms shall be orange.

- Each screen shall contain a field to display text messages – a MESSAGE BLOCK/ MESSAGE BAR. This field shall annunciate alarms, intercom calls, and system messages associated with the control station.

- Activating the “VSS” icon shall switch the display to a screen listing all of the VSS camera monitor numbers and DVR's and a description of the camera and monitor locations available to be viewed at that location. Central Control shall be able to view all VSS cameras in the facility.

- Activating a VSS camera icon shall cause the video from that camera to be displayed on the designated monitor.

- Activating the “HOLD UNLOCKED” icon prior to selecting a door unlock icon shall hold the door in an unlocked status. The door may be relocked by again selecting the door unlock icon.

- Graphical User Interface (GUI) Screen System Alarm Reporting Functions

  - The following alarms shall be reported on the Central Control GUI screen terminal:

    - Unauthorized exit (opening) of any door monitored/controlled by the Central Control terminal or any station transferred to Central Control.

    - “Panel Disable” alarms from any control station.

    - Personal Alarms (By Area) Additional personal alarm information to be reported on the personal alarm system terminal.

Quality Assurance

- The ~~Installer~~ Project Company shall provide all work as required for detention facilities. All equipment shall meet the highest reliability and performance standards established for the particular item of work. All equipment shall be vandal proof; provide enclosures, housings and security fasteners as shown on Contract Documents and as required by field conditions. All security electronics control equipment shall be lockable NEMA 12 enclosures unless they are rack mounted in secure electronic equipment rooms. The ~~Installer~~ Project Company shall provide the work based on the highest standards.

Computer Systems Configurations

- Provide rack mountable Quad-Core RAID 5 Server grade Central Processing System (CPS) computers: Provide quad-core type servers configured with the devices listed below, at minimum for all equipment room locations.
    - Processors: Intel current generation quad core Xeon processors, or higher with 8MB level 3 cache.
    - Random Access Memory (RAM): DDR3, DRAM, or better.
    - Redundant Storage: Integrated SAS/SATA RAID 5 PERC 5/i controller with 16MB of cache. Provide at minimum three 2.5" SATA 80GB hard disks 10K RPM.
    - For Detention Control System Computer, provide Backup & Disaster Recovery. Interface with the Uninterruptible Power Supply System as required to ensure automatic orderly shutdown prior to depletion of battery power.
    - Video: 1GB Video RAM, 2,560x1,600 dpi.
    - Dual Network Interface Card: Pro Gigabyte NIC PCI Ethernet.
    - Sufficient serial interfaces to meet design requirements as outlined.
    - Monitor, Keyboard KVM: 19" LCD 1,280x1,024, Keyboard, and Mouse combination rack mount KVM console unit.
    - Power Supply: Dual, hot redundant. Provide dual thermostatically controlled fans.
    - Software, Configuration, Programming & Testing: Windows Server 2008 R2 or latest equivalent, Application Development Platform, Device Drivers, project specific application programming (complete and operational).
    - Warranty: Three (3) years, Gold, on-site, all parts, and labor by manufacturer.

- Programmable co-processor
- Input/Output Bus Controller

- Provide single processor, rack mountable, server grade computers with Intel current generation quad core Xeon processor, 500 GB hard drive, 8 MB cache, Dual Port 1GbE Nic, and 8 GB Memory @ 1600Mhz, for all floor local control stations. All local control computers shall be networked to the headend computers at Center Control over 1 GB fiber optic Ethernet LAN.
  - Keyboard & Navigation: Performance pro-keyboard with wireless mouse.
  - Monitor: 27" LCD touch control type terminal/monitors, 1,680x1,050 resolution.
  - Sufficient serial interfaces to meet design requirements as outlined.
- The ~~Installer~~ Project Company shall base the RAM hard disk and controller (HDC) capacity calculations on specified systems response times, actual Operating System (OS), Application Programs (APS), SQL Compatible Relational Data Base (RDB), Graphic User Interface (GUI), AUTOCAD (CAD) files and operational requirements for this project.
- Program the "Graphical User Interface (GUI)" Touch Control Security Systems Computer using a Supervisory Control and Data Acquisition (SCADA) program. Perform all initial programming and testing off-line to ensure that the transition to the server is minimum.

Systems Software

- Software shall be supported by a real time, multi-user event driven operating system. The operating system shall support priority levels and shall support time-sharing for tasks of the same priority.
- Utilities for file management, file backup and password security shall be an integral part of the operating system.
- The applications shall include the following functions:
  - Graphic User Interface (GUI) type hierarchical menu system
  - Program/Ladder Logic Editor, monitor and off-line testing
  - Point monitoring (minimum 10,000)
  - Logical addressing, Image/Physical Location Addressing, Indirect Addressing through logical functions implemented including "AND, OR, INVERT, ON/OFF, TIMER, COUNTER, SEQUENCING", Indexed Addressing/Status Addressing, Symbolic/ASCII descriptor addressing.

- Automatic or interactive output point control
- Memory map-graphic display
- Time dependent, channel, alarm, and status reporting
- Printed journal log: Provide default programming for alarm printing only
- Magnetic media journal log: Provide default programming for alarm logging only
- County~~/State~~ generated forms
- Real time status query for maintenance, diagnostics
- Management reports from historical data
- System security
- Online or offline database update with comments, symbols and instructions. Provide global search and editing for all application program functions. Provide sequential function chart type program editor and program monitor.
- System diagnostics, both locally and remotely through telephone modem, through security firewall hardware (key-lockable switch) and software.
- Color Graphic - Site plan/floor plan, graphic maps
- Offline and Online memory scanning and diagnostics in synchronous and asynchronous modes for execution of commands with special interrupt privileges.
- Supervisory/watchdog processor

Programmable Logic Control (PLC) System

- The PLC shall be the product of manufacturer of PLC System engaged in the production of controllers for security application for a minimum of twenty (20) years. Only manufacturers with national distribution, national servicing and local parts outlets shall be considered.
- System software shall be contained in EPROM. RAM operation database shall be battery backed up. The program shall be developed for each controller on an individual basis. Furnish one spare EPROM for each controller, loaded with all the proper software and located with the controller.

- The programming format shall be traditional relay ladder logic utilizing basic and advanced instruction sets for function generation.

- The Main Central PLC shall be equipped with dual redundant processors. The local PLC controller shall be equipped with a processor, I/O modules, communication modules, power supplies, and accessories as required for a complete and functional unit.

- Controller shall be configured to operate in a distributed processor environment and equipped with communications capability as required.

- The I/O interface boards shall be standard printed circuit boards containing the necessary coding/decoding solid state circuits for communicating with the processor, LED indicators which display the status of each point and plug-in input/output modules.

- The controller shall operate on 105 to 130 VAC, 60 Hz and contain an integral circuit breaker for overload protection. The primary power for all security control equipment shall be UPS power s~~pecified elsewhere in these Contract Documents~~. Coordinate with UPS power requirements with Electrical provider. The controller shall operate properly in environmental conditions of 0° to 60° celsius in up to 95% humidity (non-condensing). The controller shall conform to electrical noise standards of IEEE-472.

- PLC program shall be provided to the County~~/State~~ as follows:

    - Hard copy printout

    - Program on DVD

    - All programs stored on the hard drive of the programming data terminal only accessible through appropriate level of password protection.

- The controllers shall provide all necessary logic functions, timing functions, memory, software, input/output points and communication capabilities for the operating features required to meet all of the requirements.

- The controller shall be general purpose in nature and not custom designed and built for this isolated application. The PLC shall be redundant and fault tolerant operation type. The controller shall be generally non-location specific in its construction. The controller shall be made location specific and operationally customized by installing EPROM with applicable software, and making the I/O interface board's system specific and installing the proper I/O modules.

- Logic functions shall include, but not be limited to, AND, OR and INVERT functions with sufficient levels to provide operating features required to perform all of the functions required.

- Timing functions shall include, but not be limited to, on-delay, off-delay, stepping and pulsing. Sufficient variations of programmable timing shall be available to provide all the operating features as required herein.

- The Central head PLC shall consist of redundant CPUs, redundant power supplies, hot standby simultaneous processing and function in Duplex and Simplex modes. It shall have a complete CPU, I/O, link and battery self-diagnostics function.

Programmable Logic Control - Input/Output (PLC - I/O) Units

- The Central Processing PLC and PLC - Input/Output (PLC - I/O) units shall be 100% compatible and be manufactured by the same manufacturer as part of an integrated series/family of products. The PLC/PLC - I/O units shall be connected to CPS via RS-232/RS-422/RS-485 ports. PLC/PLC - I/O units shall include interfacing to Security & Communication Systems as shown and specified.

- The Central PLC units shall contain all hardware and software necessary for the systems specified under Division 28 to operate as an integrated system which meets the reliability and performance specifications described.

- Provide PLC - I/O units as required for the Security & Communication Systems.

- The PLC - I/O units shall be configured for:

    - 24V DC signal threshold: The PLC's provided for this project shall operate with "high signal current/low impedance" to ensure that external RFI/EMI influences do not result in false signaling and controls. The PLC I/O's shall include time delays to ensure that short spikes shall not result in false signals. The PLC I/O's shall be configured for RFI/EMI immunity similar to electromechanical relays operating at 24 volts.

    - "Watchdog" circuits and relays as required to ensure that the system fails in "fail secure" condition, 100% of times when a system malfunction or power failure occurs.

    - "Fail Secure" mode of operation during start-up and diagnostics.

    - Built-in self-diagnostics and programmable "Reminder Operator Signaling".

    - Built-in status indicators for power supplies, memory and communication ports.

    - I/O drivers for connecting remote I/O devices which may be up to 10,000' from control equipment.

  - Multiple levels of "AND, OR, INVERT, ON/OFF, DELAY, COUNT UP/COUNT DOWN COUNTERS, ON DELAY/OFF DELAY, RETENTIVE TIMERS, SEQUENCING, COMPARE, EQUAL, GREATER THAN (OR EQUAL), LESS THAN, LIMIT TEST, COMPUTER, AVERAGE, MOVE, FOR NEXT, JUMP, RETURN, ONE SHOT FALLING, ONE SHOT RISING, SEND/RECEIVE MESSAGE, STRING CONCATENATE, STRING EXTRACT, EXTEND BUFFER" functions as required for implementation of redundant, multiple station control, signaling and interlocking.
  - Communication ports for Ethernet 10/100/1000 Mbps, RS232, RS422, and 20MA connectors.
  - Supervision of all circuits – input and outputs to determine faulty wiring from open contacts.
- PLC input/output units shall be manufactured by the PLC CPU manufacturer.
- Remote I/O units may be distributed throughout the facility to reduce wiring.

Door Control and Monitoring Equipment

- The ~~Installer~~ Project Company shall coordinate the requirements of door hardware and control/monitoring requirements described in this section.
- The door hardware and control shall include:
  - Concealed door position monitoring switches
  - Concealed latch monitoring switches
  - Fail secure locks
  - Manual emergency key type operation, from both sides
  - Interlocking with other sally port doors/gates/roll-up doors in the configurations shown on the floor plans, through the Central Processing and Programmable Logic Control (PLC) systems specified in this section.

Vehicle Sally Port Control and Monitoring

- The roll-up doors at the main vehicular sally port, with associated controllers shall be provided with control and monitoring from the Central Control and Local TSC controller. The ~~Installer~~ Project Company shall coordinate all control requirements with the door provider and the Project Company. ~~electrical Installer~~ Controls for electrical doors shall be as outlined and shall perform as follows:

- Control Functions – Central Control and Local Control console shall operate doors
- The entry and exit to the gate shall be "controlled in and out"
- Door opening is initiated by pressing the OPEN icon
- Door is closed once vehicle clears vehicle detection hardware
- A STOP icon allows the doors to be stopped in any position
- Resuming Movement - Door movement may be resumed in either direction by pushing the appropriate button.
- Door movement may be reversed in either direction by pushing the appropriate icon. The control system automatically stops the gate, pauses, and then causes the gate to travel in the opposite direction.
- All wiring shall be in underground conduit
- Provide all required Open and Close Loops and related equipment required for proper operation.
- Coordinate all performance functions necessary; all control wiring and all conduit requirements with all appropriate trades.
- Refer to operational requirements as outlined
- Communications between the door location and Center control shall be provided by weather proof intercom stations located at the entry and exit locations near the door. On initiation of the intercom stations the local camera shall provide video by automatic call up of this entry door camera with a spot monitor located at the Center Control console. Coordinate audio and visual requirements with the County~~/State~~.

Vehicular Swing and Slide Gates Control and Monitoring

- The swing and slide gates with its associated controller are provided by another trade that is specified elsewhere. The SCC shall coordinate all control requirements with the gate provider and the Project Company. ~~electrical Installer~~ The control of the swing and slide gates shall be as follows:
  - The Central Control and Local Control console shall operate the gates.
  - The SCC shall provide an entrance and exit dual height pedestal with two (2) weatherproof intercoms and a camera at the entrance, and two (2) weatherproof intercoms only at the exit – no camera.

- The TSC icons of the Central Control and Local Control console shall have operational control of the slide gate including an Open, Closed and STOP icon.
- The TSC icons of the Central Control and Local Control console shall have operational control of the swing gate including an Open icon.
- Provide all the open and close loops and related equipment for safe and proper operation.
- All wiring shall be underground conduit.
- Coordinate all performance functions necessary – all wiring, conduits, trenching, concrete requirements – with all appropriate trades.

Lighting and Utility Control

- Provide all necessary software and interface hardware to control from the TSC local control console GUI screens the holding Lighting for and water supplies for all cells.
- ~~Security Installer~~ Project Company to provide I/O and interposing relays if necessary to interface to lighting control panels, TV power, telephone power, and plumbing control valves provided by other trades specified elsewhere.

Relays

- Provide UL listed relays where required to interface to high power devices and where electrical isolation is required in high power circuits.
- Relay coils shall be 24 VDC.
- Relay contacts shall be sized as required for min. 100,000 hours of operation under normal conditions of use. The contacts shall be rated for 50% greater amperage than anticipated load.
- Provide damping diodes and devices as required to support EMI/RFI generation.

Touch Screen Operation Interface Terminal

- The touch screen shall be the product of a manufacturer engaged in the production of touch screens for industrial applications for a minimum of five (5) years.
- Provide minimum 27” color LCD touch screen monitors for each operator computer station.

- Provide all mounting hardware and cabling for each console mounted touch screen.
- The touch screen monitors shall meet the following minimum requirements:
    - Resolution: 1,920 x 1,080' (native at 60 or 75 Hz)
    - Colors: 16.7 million
    - Brightness: 300 cd/m2
    - Viewing Angle: Horizontal 170º total Vertical 160º total
    - Response Time: 2 milliseconds
    - Input Video: HDMI, 15 pin D-Sub, DVID, DVI-I and VGA
    - Power Supply: Input (line) voltage - 100-240 VAC, 5,060 Hz, Monitor Input Voltage - 12 VDC at 3.75 amps.
    - Power Distribution: 40 watts (typical)
    - Agency Approval: UL/cUL, FCC/IC/VCCI/C
    - Anti-glare Surface Treatment
    - Mounting Options: 100mm or 75mm VESA mount, rear mount monitor only, or with brackets, panel cutout.
    - Warranty: 3 years for monitor

Alarm and Status Reporting

- Alarm annunciation may be selectively steered to any combination of control consoles. Alarms may be individually prioritized for each console and alarms above a given priority shall cause an audible alarm.

Journal Log

- The system shall have the capability to selectively log all events in the system to both a printer and to CPS disk storage system. All log entries include a time stamp, an event descriptor and, when applicable, an operator.
- Alarms logged shall include information presented to the consoles and the system shall create a corresponding acknowledgment message when the alarm is acknowledged.

- The printer shall support multiple fonts and expanded print to highlight alarms. The descriptor printed for each state of a point may be individually selected.
- The magnetic media journal shall serve as system archival storage from which management reports may be generated or the printed journal recreated. The system shall support two journal storage devices to provide long-term removable storage and short-term fast access storage.
- Reports shall run concurrently with, and at a lower priority than, the critical system functions and shall not affect the response time of alarm annunciation.
- Reports shall be selected from a menu of predefined report formats which shall include:
    - All activity between a selected start time/date to stop time/date.
    - Non-circuit activity between a selected start time/date to a stop time/date.
    - Circuit activity between a selected start time/date and a stop time/date.
    - Activity for a group of points between a selected start time/date and a stop time/date.
    - All Watch Tour reports
    - All control console activity
    - All supervisory circuit activity
    - All activity for a group of points
    - All duress alarms
    - All takeover commands
    - All fire alarms
    - All general alarms
    - All vehicle sally port door openings
    - Other user defined groups
    - All incident reports

System Security

- The integrity of the system shall be protected by a system of operator passwords, access levels, and audit trails.
- Each operator is assigned a password and access levels. When an operator logs on the system, they shall be asked for his/her operator name and password. If these match, they shall be allowed to perform any function allowed to their access level. Each operation is included in the system log.
- In addition to the logging of an operator entry, the system shall record any transaction which shall affect the operation of the system.

Self Diagnostics

- The system shall have the capability to detect and annunciate the failure of any subsystem. When a failure is detected, the system shall perform on-line diagnostics to pinpoint the failure and recommend corrective procedures. These diagnostics can also be checked through the telephone modem.

Cabling Requirements

- ~~Installer~~ Project Company shall be responsible for sizing all cables and conductors to minimize voltage drop based on anticipated loads of each circuit. Voltage drop shall not exceed the manufacturers' of the equipment being supplied recommendations or a maximum 5% voltage drop.
- Input cables shall be a minimum 18 AWG copper stranded cable; output cables 16 AWG and shall be shielded twisted pairs, 600 volt, 90ºC UL listed if installed in cable tray, shall be VNTC cable tray rated. If installed in conduit, Small Diameter Neoprene (SDN) 600 volt, 90ºC type TC cable.

Adjusting, Testing and Cleaning

- General
    - Upon completion of the work, remove excess debris, materials, equipment, apparatus, and tools, and leave premises clean, neat and orderly.
- Testing

- Component Testing - Each separate component of the Security System door/utility control and monitoring system shall be tested individually. In particular, each printed circuit board shall be tested for circuit continuity and circuit isolation. All electronic components shall be operated for the time duration required to identify product failures and the board shall be completely operationally tested. This testing shall be done at the site of the control equipment manufacturer.

- Factory Testing

  - All components of the Door Control and Monitoring System shall be operationally tested together with the exception of the end devices. At this time, all components and interconnecting wiring shall be complete and fitted with their respective plug.

  - The ~~Architect, Engineer,~~ Project Company and County~~/State~~ have the option of witnessing all factory tests. Notify ~~Architect, Engineer,~~ Project Company and County~~/State~~ at least 4 weeks prior to system testing.

- Site Testing

  - All security control equipment, including computer systems, PLC, locks, monitoring devices, and integration of all security equipment. All inputs and outputs to the PLC shall be fully tested by the ~~Installer~~ Project Company.

  - All communication links between PLC and workstation computers shall be fully tested as well as the redundant features of the Central PLC and CCC computers.

  - All test reports shall be issued to the ~~A&E~~ Project Company prior to ~~FINAL ACCEPTANCE~~ Occupancy Readiness .

- The commissioning of the lighting control, and miscellaneous electrical utility controlled power circuits shall be a joint effort between various Project Companies. ~~installers~~

6. STRUCTURAL SYSTEMS CRITERIA

6.1 General Design and Construction Standards

The New Courthouse and the Parking Structure structural systems shall be designed to support the use of the facility and ensure that the building is structurally sound and operational. Since the specific uses within the courthouse building may change over time, the structure shall be designed to accommodate for increase in load concentrations in the future. Various structural systems shall be evaluated to find a system that meets the requirements of the courthouse. The garage structural system shall be designed to accommodate loads for future expansion from 675 spaces to 1,200 spaces.

6.2 Specific Design and Construction Standards

Codes and Standards

The project must meet codes in force at time of permit submission which includes the latest edition of the applicable code in effect.

- IBC International Building Code
- ASCE 7-10, Minimum Design Loads for Buildings and Other Structures
- ACI 318-13, Building Code Requirement for Concrete Structures
- ACI 530-13, Building Code Requirement for Masonry Structures
- American Institute of steel Construction - AISC 14th Edition
- American Welding Society - D1.1 Standards, current edition
- Local Howard County amendments

Materials

Reinforced Concrete

• Slab on Grade	f'c = 4000 psi
• Foundation	f'c = 3000 psi
• Concrete on elevated floors	f'c = 4000 psi
• Beams and Columns	f'c = 4000 psi
• Concrete Exposed to weather	f'c = 5000 psi
Reinforcing Steel	American Society for Testing and Materials A615 Grade 60
Welded Wire Fabric	American Society for Testing and Materials A185
	Structural Steel
• Rolled Wide Flange Sections	American Society for Testing and Materials A992, 50 KSI
• Rolled Channels	American Society for Testing and Materials A36
• Rods, Plates, Angles	American Society for Testing and Materials A36
• Hollow Structural Sections	American Society for Testing and Materials A500-B
• High strength Bolts	American Society for Testing and Materials A325 & A490

Loads

Live Loads

- Slab on grade - Coordinate with local building code amendments, current facilities standards and current International Building Code.
- Second Floor/Other Elevated Floors - Design for minimum 100 psf. Coordinate with current facilities standards and current International Building Code.
- Roof - Coordinate with local building code amendment and current International Building Code.

Snow Load

- Ground Snow load, Pg = per local code amendments
- Snow Exposure Factor (Ce), Snow Importance Factor (Is), and Flat roof Snow Load (Pf) are calculated per current International Building Code.

Wind Loads

- Basic Wind Speed (3-second gust) 120 MPH
- Design the courthouse building and garage for wind load based on current International Building Code.

Seismic Loads

- Acceleration Coefficients, Ss = 0.124g and S1 = 0.051. Refer to preliminary geotechnical report.
- Occupancy Category = III
- Site Class = D, Refer to preliminary geotechnical report.
- Importance Factor = 1.25

Vibration Criteria

Design steel framed floors for vibration control for Human Sensitivity in accordance with AISC Design Guide 11 "Floor Vibrations due to Human Activity", Chapter 4.

Deflection Criteria

Design floor and roof framing to control deflection damage to finishes and other non-structural components, using the serviceability criteria in the current International Building Code and also the current facilities standards. Use the current International Building Code for deflection criteria for garage structure.

Concrete floors conform to deflection limits of ACI 318, Table 9.5(b) for floors supporting nonstructural elements likely to be damaged by large deflections. Compute deflections in accordance with methods of ACI 318. Satisfying thickness limits of Table 9.5(a) of ACI 318 shall not be deemed to comply, based on likelihood of damage to nonstructural elements.

Consider the effects of cracking on member stiffness and the creep deflection of concrete due to sustained loads, in accordance with the methods of ACI 318, Chapter 9, or appropriate computer analysis software.

Performance Criteria

The selection of the primary structural system for the new court facilities shall be based on a variety of factors. The following are some of the factors that shall be considered when deciding the primary structural system.

- The building shall be designed with longest practical clear spans of the horizontal framing members between columns mostly at court rooms, lobbies and jury assembly areas. The garage shall also have longest practical clear spans of the horizontal framing members for access to cars.
- The floor and roof framing along with slab design shall provide flexibility to accommodate the modification of the use of certain areas in future. The partition walls location may also be finalized after the construction.
- Vibration control needs to be properly addressed specially in the trial facilities. Two types of vibrations, one from operating equipment and other from walking or moving across needs to be addressed.
    - Vibrations due to operating equipment could be addressed with the provision of isolating mounts or motion arresting pads.
    - Floor Vibrations due to human activity, such as walking, can cause nuisance to people working in the building. These vibrations usually are controlled by the design of the floor framing and slab system. Trial facilities are usually designed in the slightly perceptible range per AISC criteria.
- Floor to floor heights within the building may vary due to the varying court functions that occur within the facility. The structural design must account for varying floor heights.
- Lateral Load Resisting Systems: The lateral load resisting system is required to resist the lateral loads that occur due to wind or seismic event. The vertical component of the system are usually braced frames, moment resisting frames or shear walls. Coordinate braced frames with permanent solid walls.
- Floor loading shall comply with the minimums as listed in current code and the facilities standards.

6.3 Detailed Design and Construction Requirements

Foundations

- Design and construct foundations for courthouse and garage per site soil conditions. Some preliminary borings have been provided in accessible areas. The Project Company shall develop foundation designs based on the information provided by the preliminary geotechnical report where site conditions dictate, incorporate ground improvement measures or deep foundations to mitigate liquefaction potential and/or provide adequate bearing capacity.
- ~~The Project Company can base their foundation design on the assumption that the Preliminary Geotechnical Exploration Report dated September 23, 2016 is representative of the soil conditions across the Developable Area of the site. If actual soil conditions are found to be materially different from those represented in the Preliminary Geotechnical Exploration Report and thus require a more costly foundation system, the additional cost of the foundation shall constitute a Relief Event.~~
- Design and construct foundation system to respond to site ground water conditions.
- After selection, the Project Company shall provide their own geotechnical engineer to evaluate the site conditions and make recommendations for foundation design.

Slab On Grade

- Design and construct slab-on-grade for courthouse and garage suited to intended uses, in accordance with recommendations of the geotechnical investigation report, and ACI 302.1-04 “Guide for Concrete Floor and Slab Construction”.
- Design and construct structural slab-on-grade, capable of resisting hydrostatic pressure, where made necessary by groundwater conditions.
    - Waterproof underside of slab when made necessary by groundwater conditions.
- Slab shall be cast level or sloped to drains, with appropriate finish, to satisfy the occupancy requirements. Slabs at garage shall be sloped to drains.
- Construct solid concrete pads and bases as necessary and as required to elevate all equipment a minimum of 4" above floor. Oversize as necessary to provide adequate edge distance for equipment anchorage.

Basement Walls

- Design and construct basement walls of reinforced concrete to safely sustain all vertical loads, earthquake-induced loads and loads due to unbalanced lateral earth pressure.
- Provide sub-drainage system for below grade walls to relieve hydrostatic pressure associated with irrigation water and rainwater.
- Waterproof exterior face of below grade walls. Provide water stops at pipe and other penetrations on below grade walls.

Structural Frame

- Steel columns that are part of the lateral force resisting system shall extend to foundations (i.e. shall not terminate at the ground floor where there is a basement below).
- Structural components not included in the seismic force-resisting system in the direction under consideration shall be designed to be adequate for the gravity load effects and the seismic forces resulting from displacement to the design story drift (A) as determined in accordance with ASCE 7, Section 12.8.6.

Floor Framing System

- Conventional Steel-Framed:
  - Installation of electrical and data raceways in fill over steel deck shall only be permitted with prior approval of Project Company's design professional.
  - Due to stringent vibration control required, the use of steel joists shall not be permissible for floor framing.
- Cast-in-Place Reinforced Concrete:
  - The use of precast concrete slab-type elements, including planks, tees, etc. is not permitted for the courthouse building.
  - The use of post-tension reinforcement for courthouse building is not permitted, except at beams or slab ribs.

Roof Framing System

- Rooftop Mechanical Areas:
  - Major rooftop equipment, including but not limited to air-handlers, shall be either placed on level concrete pads extending 6" minimum above the highest adjacent roofing or placed on steel dunnage elevated above roof.
- Where roof deck slopes, provide for adequate bearing on beams.
- Tiebacks and Davits: For steel framed roofs, provide structural steel members, as necessary, for direct attachment of tiebacks and davits.

Inspection and Testing

- Project Company's design professional shall be responsible for preparation and submission of a statement of special inspections in accordance with International Building Code Section 1705.
- The Project Company's design professional in responsible charge shall perform structural observations, at significant stages of construction and at completion of the structural system, in accordance with International Building Code Section 1709. Structural observations shall be made by a structural engineer registered in the State of Maryland and familiar with the design of the structure.

Observation is intended to ensure that gross errors in key elements of the courthouse building and garage shall be prevented. It is intended to Supplement, and not waive, building inspection and special inspection.

- The Project Company shall be responsible for hiring an independent testing and inspection agency to perform all testing and inspections required by applicable codes.

7. MECHANICAL SYSTEMS CRITERIA

7. Mechanical Systems Criteria

Overview

The project shall include design for all mechanical systems required to provide a complete and functioning state-of-the-art facility. The mechanical systems shall include all work associated within the building of Heating, Ventilating, Air Conditioning (HVAC), and Plumbing Systems.

The mechanical systems, in concert with the Architectural considerations shall create spaces that are functional, energy efficient, and respond to the needs of the facility. HVAC systems shall be flexible to allow for changes in space configurations without major system modifications, and must be easy to maintain with proper access.

The mechanical systems shall be designed to exceed American Society of Heating, Refrigerating and Air-Conditioning Engineers Standard 90.1 efficiencies in an effort to achieve LEED Silver Certification. Sustainable design guidelines such as ANSI/American Society of Heating, Refrigerating and Air-Conditioning Engineers/USGBC shall be resources used to exceed the minimum energy performance requirements of American Society of Heating, Refrigerating and Air-Conditioning Engineers 90.1. The systems shall be designed to meet or exceed the code requirements as set forth in the IEEC, alternative compliance path American Society of Heating, Refrigerating and Air-Conditioning Engineers Standard 90.1.

Perform and submit an Energy Model showing the calculated energy usage of the proposed mechanical systems that can be confirmed and monitored once building is occupied. In addition, provide a Building Energy Management System that shall be capable of monitoring energy usage for all mechanical systems for comparison against the Energy Model.

The mechanical design shall comply with the latest edition (unless otherwise noted) of all applicable Federal, State and local codes, regulations, standards and Authorities Having Jurisdiction.

Performance Criteria

Outdoor design conditions shall be as listed in American Society of Heating, Refrigerating and Air-Conditioning Engineers for the State of Maryland for 99.6% Heating DB and 0.4% Cooling DB/MCWB.

Indoor design conditions shall be 68-72° F. DB in the winter/30% Relative Humidity; and 72-76° F. DB in the summer/50% Relative Humidity.

Space temperatures for the Server Room shall be 68-72° F. DB/50% Relative Humidity year-round. Provide a high space temperature alarm to building ATC system for notification of equipment failure.

Ventilation rates shall be in compliance with American Society of Heating, Refrigerating and Air-Conditioning Engineers Standard 62.1. Submit room-by-room calculations showing compliance with American Society of Heating, Refrigerating and Air-Conditioning Engineers Standard 62.1 procedure. Maintain positive building pressurization.

Temperature gradients, effects of radiant surfaces, humidity levels and air velocity within the spaces shall be in compliance with American Society of Heating, Refrigerating and Air-Conditioning Engineers Standard 55.

Interior Noise Criteria Loads: In general, comply with 2015 American Society of Heating, Refrigerating and Air-Conditioning Engineers Handbook – HVAC Applications, Chapter 48 *Noise and Vibration Control*. Selected criteria are as follows:

- Offices (Private): NC 30-35
- Offices (Open Plan): NC 35-40
- Public Circulation: NC 40-45
- Conference Rooms: NC 25-30
- Courtrooms: NC 25-30
- Jury Rooms: NC 25-30
- Exterior Noise: In accordance with local and State of Maryland requirements.

Accessibility

Mechanical equipment including fans, pumps and other items requiring routine maintenance/ service (including filters) shall be located in dedicated mechanical rooms, not above the ceiling of occupied spaces and shall be accessible to the maintenance staff for removal, repair and replacement with minimal effort. Mechanical rooms shall not be located in close proximity to sound sensitive areas such as judge's chambers, courtrooms, conferences rooms, offices etc. If variable air volume boxes are used, they shall be located above ceilings in non-critical areas.

All mechanical equipment rooms shall be accessible from public corridors and shall not require access through private or secure spaces. Mechanical equipment rooms that allow access from the exterior into the remainder of the building shall be avoided for security purposes.

It is preferred that mechanical equipment be located within the building or within a mechanical equipment penthouse. If mechanical equipment is located on the roof or on site, it shall be screened by view in a manner fully compatible with the building architecture.

HVAC Zoning

The HVAC system shall be zoned to provide maximum flexibility for building usage. Temperature control zoning strategy must follow typical American Society of Heating, Refrigerating and Air-Conditioning Engineers guidelines and respond to any unique design features or room layouts of the building design. At a minimum, no zone shall be larger than 1,000 ft^2. Areas with more than one exposure shall be a separate zone.

Individual temperature control shall be provided for each courtroom and Judges Chamber.

Areas containing offices shall have zoned temperature controls for employee comfort.

Public areas such as the courtroom lobby area, Main Lobby (or any area where the quantity of people shall vary throughout the day) shall have individual temperature control.

The main Lobby shall be pressurized to prevent infiltration and shall be provided with supplemental heat.

Exterior walls with large areas of glass shall be provided with supplemental heat. Where overhead distribution of supply air is provided in such cases, slot diffusers shall be used to help prevent drafts.

Areas with different occupancy schedules from those of the main building, including those with 24-hour occupancy shall have a dedicated HVAC system and controls.

Systems that serve more than one zone, shall have adequate turn-down capacity.

Special equipment rooms (such as telephone, security, data and computer rooms) shall have separate, dedicated HVAC systems and temperature controls.

Provide the Armory and Property Room with separate HVAC controls to regulate both temperature and humidity.

The Mail Room shall have an independent HVAC system with the room having the capability of being “sealed” in case of contamination.

The design of the HVAC system must anticipate that large open area spaces may in the future be converted to courtrooms. Therefore the HVAC system must be adaptable to ensure that future courtrooms do not share common HVAC systems with non-courtroom systems.

All main distribution elements shall run in corridors where practical to facilitate maintenance and reduce disruption in the case of system alterations.

For privacy and acoustical reasons, all returns shall be ducted. Return air plenums are not permitted.

For privacy and acoustical reasons, return air plenums are only permitted in the spaces noted below. All other returns shall be ducted. In spaces where plenum returns are permitted and utilized, the design shall incorporate features to prevent cross-talk from one room to another such as the use of Z-ducts, sound attenuators or other acceptable practices to maintain confidentiality. Additionally, in no case shall the NC level in any room exceed the noise level criteria listed in the Design and Constructions Standards or the American Society of Heating, Refrigerating and Air-Conditioning Engineers Handbook-HVAC Applications for each space type. The design of the plenum return air system shall be such that pockets of ‘dead air’ are eliminated and air movement is consistent. Spaces which may incorporate plenum returns are as follows:

- Court Administration
- Calendar Management
- Family Law
- Clerk of Courts (Except for Interview Room where ducted returns are required)

- Register of Wills (Except for Fireproof Storage where ducted return is required)
- Staff and Support spaces for Orphan's Court (Except for Courtroom space where ducted return is required)
- Court Reporters
- Law Library
- Jury Assembly
- Sheriff Staff Space
- Sheriff Support Space (Except for K-9 where ducted return is required)
- Sheriff Court Services (Except for Security Equipment Room, Control Room & Toilet where ducted return/exhaust is required)
- State's Attorney's Staff Space
- State's Attorney's Support Space (Except for Conference Rooms and Interview Rooms where ducted return is required)
- Public Defender
- Department of Juvenile Services
- Department of Social Services
- Bar Association
- Cafeteria, Maintenance Office, Closets Maintenance Shop & Storage, Housekeeping, Bulk Storage, Receiving, Trash Room & Recycling.

All other spaces not listed above are to be provided with ducted returns.

Maintainability and Redundancy

Consideration must be given to the layout of the mechanical rooms to allow for reasonable maintenance procedures. Mechanical equipment room layout shall include, but not be limited, to the following:

- Filter space pull must be clearly indicated on drawings.
- Service aisles must be clearly indicated on drawings, showing the routing provided to replace the largest component into position.
- Adequate access shall be provided to all components of the HVAC equipment to avoid having to disassemble components or remove other equipment to gain access.

- Large pieces of equipment which cannot be disassembled shall be removed in one piece.
- Maintain minimum 6'-8" clearance to underside of pipes, ducts, conduit, and suspended equipment throughout access routes in mechanical rooms.

The mechanical system design shall incorporate at a minimum the following levels of redundancy:

- Systems with hot water boilers must include an N+1 arrangement for both pumps and boilers, such that one boiler or one pump can be taken out of service and repaired with the system still providing 100% capacity.
- Systems with hot water boilers must be sized to handle the heating load with the largest heat recovery device (if provided) out of service.
- Systems with chillers must include an N+1 arrangement for chillers, pumps and cooling towers such that one chiller, pump or cooling tower can be taken out of service and repaired with the system still providing 100% capacity.

HVAC Design Considerations

The New Courthouse shall be served by a four-pipe chilled water/heating water system consisting of water-cooled chillers and boilers sized for the building load. Variable speed chilled water and heating water circulating pumps shall distribute chilled water and heating water throughout the building via a primary/secondary pumping arrangement.

As an option, Geothermal systems may be considered, as long as heat pump units are not located above the ceilings.

Any future buildings that may built on site shall have their own dedicated mechanical systems installed in those buildings.

Cooling tower fans and condenser water pumps shall be equipped with variable speed drives. Provide means to filter the condenser water to avoid silt build-up within the system.

Detention areas shall be provided with 100% outside air with energy recovery at a rate in accordance with code requirements, designed for continuous operation and independently controlled and zoned. Airflow rates shall be adequate to control odors which may require rates higher than code requirements.

Holding cell areas shall be under negative pressure to prevent odors from spreading to adjacent areas. Employee areas shall be under positive pressure.

The animal holding area shall be provided with an independent exhaust system that prevents odors from spreading to adjacent areas and discharges directly to the outdoors.

Space temperature of the animal holding area shall be monitored by the Building Energy Management System and shall provide an alarm to notify command center if the temperature in the area exceeds maximum temperature set point.

All ductwork penetration through the secured perimeter larger than 8"x 8" shall be designed with security bars. Supply and return air diffusers located in detention areas shall be anti-ligature, maximum security type grilles.

Each Courtroom shall be independently zoned from other spaces to accommodate fluctuations in the number of occupants that occur throughout the day. Acoustical treatment shall be provided as required to prevent transmission of sound from mechanical equipment into the Courtroom spaces. Mechanical equipment shall be located and isolated as required so that vibration from equipment is not noticeable.

Ventilation air rates shall be determined by the requirements set forth by American Society of Heating, Refrigerating and Air-Conditioning Engineers Standard 62 (latest edition).

The HVAC system serving the Sheriff's Area, Telecom Rooms, Electrical Closets, Security Closets, AV Closets, Server Rooms, Server Racks and one (1) Courtroom shall be connected to Emergency Power to allow the spaces to function as designed in the event of a power outage.

A water leak detection system shall be provided in the Main Server Room to protect the server equipment from water damage. Upon detection of water/moisture, the system shall send an alarm to notify command center of the situation.

Smoke Management: The building shall be provided with a smoke management system were required by local, State or Federal codes.

Toilet room exhaust systems shall be provided for all toilet rooms. Janitor’s closets and any other chemical areas shall be enclosed and directly exhausted.

All intake louvers shall be located away from pollution sources, exhaust air, idling vehicles, or other pollutants that may come from neighboring buildings.

Air handling units shall utilize MERV-8 pre-filters and MERV-13 final filters at a minimum, for outside ventilation airflow.

Provide demand controlled ventilation in multi-occupant spaces per Code and LEED requirements.

The HVAC design shall be coordinated with an Acoustical Consultant to address both noise and vibration control.

If provided, enclosed Parking Structure must be ventilated according to IMC (latest edition) and American Society of Heating, Refrigerating and Air-Conditioning Engineers Standards.

Provide tempered ventilation air and general exhaust for Cafeteria Kitchen. Provide kitchen exhaust hoods over all heat producing kitchen equipment with exhaust and make-up air systems as required based on kitchen layout. Hoods exhausting grease-laden air shall be provided with kitchen hood fire suppression system.

Cafeteria shall be conditioned, ventilated and exhausted as required to prevent food odors from migrating to surrounding spaces.

Provide Commissioning Services for all mechanical systems including but not limited to Heating, Cooling and Ventilation systems, exhaust systems, outside air systems and HVAC controls systems.

Automatic Temperature Controls Design Considerations

A Building Energy Management System shall be provided for the control and monitoring of all building mechanical systems. All Automatic Temperature Controls shall be Direct Digital Control, with electric/electronic actuation. The ATC system shall interface with all HVAC equipment.

~~**Roosting and Nesting Prevention**~~

~~The Project Company shall provide and install any protection needed based on where birds actually start to roost during operating period.~~

8. ELECTRICAL SYSTEMS CRITERIA

8. Electrical Systems Criteria

Overview

The project shall include all electrical systems required to provide a complete and functioning state-of-the-art facility. Electrical Systems shall include work associated with Electrical, Power, Lighting Distribution Control, Security, Telecommunications, Data, and Special Systems.

Electrical Systems are intended to create spaces that are safe, flexible, functional, energy-efficient, and respond to the needs of occupants utilizing this facility. The electrical systems shall not only be functional and responsive to the type of facility, but shall be simple, reliable, durable and maintainable.

The electrical systems shall be designed to exceed American Society of Heating, Refrigerating and Air-Conditioning Engineers Standard 90.1 efficiencies in an effort to achieve LEED Silver Certification. Sustainable design guidelines such as ANSI/American Society of Heating, Refrigerating and Air-Conditioning Engineers/USGBC/IECC shall be resources used to exceed the minimum energy performance requirements of American Society of Heating, Refrigerating and Air-Conditioning Engineers 90.1. The systems shall be designed to meet or exceed the code requirements as set forth in the IEEC-2015, alternative compliance path American Society of Heating, Refrigerating and Air-Conditioning Engineers Standard 90.1.

Codes and Standards

The Electrical Design shall comply with all applicable Federal, State and local codes, regulations, standards and Authorities Having Jurisdiction. In addition, the building shall be LEED Silver Certified. Note that the codes and standards are minimum requirements.

Design Criteria

The courthouse shall be provided with a 480Y/277V, 3 phase, 4 wire, solid neutral electrical service provided by the utility company (BGE). The underground electrical service shall be provided through installing a pad-mounted transformer, which shall be sized through coordination with the power company and shall be located near the building. All power company coordination, transformer pad installation, metering provisions and ductbank work shall be done in strict accordance with the power company requirements and standards.

The size of the electrical service shall be based on peak demand loads of the mechanical system, other anticipated building equipment, lighting and convenience receptacles, including 25% future load (spare capacity).

Provide Commissioning Services for all electrical equipment and systems including but not limited to Power Distribution Systems, Lighting Control Systems, Emergency Generator Systems, and Uninterruptable Power Sources.

Accessibility

Electrical equipment including panelboards, disconnects, motor starters, etc. shall be located in electrical or mechanical rooms, not above the ceiling of occupied spaces, and shall be accessible to the maintenance staff for removal, repair and replacement with minimal effort. Electrical and Mechanical rooms shall not be located in close proximity to sound sensitive areas such as judge's chambers, courtrooms, conferences rooms, offices etc.

All electrical equipment rooms shall be accessible from public corridors and shall not require access through private or secure spaces. Electrical equipment rooms that allow access from the exterior into the remainder of the building shall be avoided for security purposes.

Electrical rooms shall be located on each floor. Closets shall stack directly above on another between floors. Closets shall limit branch circuits to a distance of 150'-200'.

Power Systems Expectations

Utility Power System

The electrical service entrance conductors shall terminate in a service entrance distribution panelboard in the Mechanical/Electrical room, which shall serve the electrical requirements of the building. The current transformer cabinet and metering for the building shall be installed to the power company requirements on the exterior of the building. The emergency power service disconnects shall be located adjacent to electric service entrance. All distribution equipment buses shall be copper.

The building power distribution system shall provide 480Y/277 Volt, three phase, four wire service to building loads as necessary. A step-down 480 Volt primary, 208Y/120 volt secondary transformers shall be installed in the Mechanical/Electrical rooms to provide low voltage power to receptacles and loads requiring the lower voltage through 208/120V, three phase panels.

Three phase mechanical equipment, all building normal system panelboards and equipment outside the building shall be served from the main distribution panelboard. The main switchboard and all panelboards serving electronic equipment shall be protected by integral SPD units.

Building electrical panels shall be located in the Mechanical/Electrical Rooms. Automatic control for exterior lighting shall also be provided in the Mechanical/Electrical Room. General convenience receptacles panels shall be located throughout the building.

Feeder wiring shall consist of copper conductors installed in EMT or RGS conduit. Branch circuit wiring shall be copper conductors run in EMT conduit or liquid-tight flexible metal conduit (LFMC). All panelboards shall have copper bus and contain full size neutral bar. Panelboards with 200% rated neutral buses and surge suppression devices shall be provided for receptacle loads. These panelboards shall be served by K-13 factor transformers.

All panelboards and distribution panels include 20% spare capacity for future growth. Provide a dedicated 208/120V 3PH, 4W 400A (minimum) feeder for a future commercial kitchen. Exact load requirements would need to be determined with the supplied equipment.

All panelboards and distribution panels include 20% spare capacity for future growth. Provide a dedicated 208/120V 3PH, 4W 400A (minimum) feeder for the Cafeteria. Exact load requirements would need to be determined with the supplied equipment.

Emergency Power System

The emergency electrical distribution to the building shall include a 480Y/277 Volt, three-phase, four-wire generator to serve the building emergency power needs.

The generator shall serve the telephone and data, fire alarm, security, access control, radio charging stations, one (1) elevator, one (1) fully functional courtroom 1,900 SF, or 2,100 SF, or 2,400 SF, sheriff area and holding cells, control room, egress and emergency lighting systems, fire pump, and other critical equipment including freeze protection, sump pumps, smoke evacuation and cooling for telecommunications equipment.

The generator shall be powered by natural gas; the use of natural gas for on-site power generation as the authority having jurisdiction has determined that natural gas is a reliable source. The emergency generator shall be located at the exterior of the Building. The generator shall have a critical sound attenuated housing and muffler. If needed, a sound attenuating wall shall be constructed to reduce level in accordance with the County Zoning Ordinance.

A minimum of three (3) automatic transfer switches (ATS) shall be required per National Fire Protection Association:

- One (1) serving Life Safety loads
- One (1) serving the standby/emergency loads
- One (1) ATS shall serve the fire pump, if required

Transfer switches shall be automatic, open transition, two-position, NEMA 1 enclosed, 4 pole switched neutral, UL 1008 listed, programmable microprocessor controller with key pad and LCD display, remote communication and control interfaced with control room. The transfer switches shall have a bypass-isolation capability for manual operation during maintenance or service.

Life safety equipment wiring shall not be installed in the same raceway serving non-life safety optional standby equipment.

A UPS system shall be provided to serve the MDF and IDF rooms. All security and security sub-systems (CCTV, access control, intercom, etc.) shall be served by the UPS system. The UPS maybe centrally located or provide a distributed set of UPS's per room. The UPS system shall provide a minimum back-up time of 15 minutes. Provide maintenance by-pass for all UPS systems to allow for battery replacement maintenance. All UPS circuits shall be backed-up by emergency generator power.

A generator remote annunciator panel shall be located at the 24-hour security desk; additionally, status shall be transmitted to the building automation system. The remote annunciator shall monitor and control the following:

- UPS Battery System
- Emergency Generator System

Electrical Distribution System

- Grounding
    - The grounding system shall be designed per NEC Article 250. The grounding electrode system shall achieve a resistance of 5 Ohms or less. A main grounding bar shall be installed inside the Mechanical/Electrical room and connected to the grounding rods, building steel and main water line.
    - The main switchboard shall be provided with integral ground-fault protection.
    - Isolated ground circuits shall be provided for critical communication, data, audio, video and security equipment. Isolated ground distribution shall be provided from source of voltage to outlet.
    - Raceways shall not be used as equipment grounding conductor and shall be provided with an insulated grounding conductor in each raceway.
- Receptacles and Equipment Connections
    - In general, convenience outlets shall be provided for maximum flexibility and ease of usage. Outlets shall be located following the standard of no less than one per wall. In large areas, outlets shall be spaced a maximum of 12' on-center.
    - Floor outlet boxes as required for data, audio and video outlets shall be provided in Court Rooms.
    - Dedicated circuits shall be provided for data racks, computers stations, copiers, cash registers, fax machines, court recording systems, metal scanners and X-ray machines.
    - Corridor outlets shall be provided no more than 50' apart. Unless specifically required, outlets shall be duplex, 20A, 120V, side-wired grounding type.
    - Ground Fault Interrupting (GFI) outlets shall be located at water coolers, toilets, mechanical rooms, sinks, exteriors and at other wet locations, and as required per the NEC.
    - At rooftop equipment: a 20 amp, 125 volt duplex receptacle shall be provided within 25' of HVAC equipment.
    - A separate neutral conductor shall be installed for each receptacle circuit in order to reduce the effects of harmonics caused by non-linear loads.

- Provide appropriately sized conduit pathways for Electrical Vehicle Charging Stations in the Parking Structure from electrical panel to station location. Garage electrical panels shall be appropriately sized to handle charging loads for the number of stations provided.

- Wiring Devices
  - Heavy-duty grade, 20 ampere rated, side-wired, grounding type conforming to NEMA Standards. All cover plates shall be brushed finish stainless steel. Floor boxes shall be steel, leveling type, with capacity for devices and wiring.

- Outlet Boxes
  - Outlet boxes for concealed work shall be zinc-coated or cadmium plate sheet steel boxes suitable for the service and type outlet. Boxes and conduit fittings for outdoor and exposed work shall be NEMA 4 cast aluminum, cast steel or cast iron type with threaded hubs for conduit entrance.
  - Outlet boxes in walls serving court rooms, judges' conference rooms, judges' chambers, law libraries, toilet rooms and holding cells shall have acoustic isolation to limit sound transmission.

- Junction and Pull Boxes
  - Junction and pull boxes shall be furnished and installed where required to facilitate pulling of wires or cables. Such boxes shall be installed in accessible locations. All boxes for concealed work shall be constructed of 12 gauge galvanized sheet steel minimum, unless otherwise specified or indicated and provided with mounting brackets and flat screw covers secured in position by round head brass or stainless steel 300 grade machine screws. Boxes for exterior work shall be cast aluminum or galvanized cast iron type with threaded hubs unless otherwise directed. Gasketed cover-plates shall be furnished for outdoor installation.

- Conduits
  - Underground: Schedule 40 PVC direct-buried minimum 30" below finished grade. Schedule 80 PVC concrete-encased with 3" envelope under paved roadway and parking areas. Minimum of 1" conduit for any exterior/underground circuit.
  - Interior: Exposed, Not Subject to Physical Damage: EMT. Exposed and Subject to Physical Damage: Rigid. Concealed in Ceilings and Interior Walls and Partitions: EMT. Connection to Vibrating Equipment Liquid Flexible Metal Conduit. Damp or Wet Locations: Rigid. Minimum size: 3/4" diameter.
  - Pull Ropes: All empty conduits.
  - Aluminum: Aluminum conduit is prohibited.

- Flexible Connections: Maximum length 72" for connection of lighting fixtures, dry type transformers and vibrating equipment. Use liquid-tight metal for connection of motors.

- Conductors
  - Copper 600 Volt THHN/THWN insulated conductors for interiors and copper 600 Volt RHW insulated conductors for exteriors.

- Over-current Protective Devices and Enclosed Safety Switches
  - Molded case circuit breaker switches shall be specified unless otherwise required by equipment manufacturers.
  - Dual Element RK1 Fuses: Where required by equipment manufacturers testing lab listing.

- Motors
  - Three Phase: One-half horsepower and larger: Where disconnect starter is not integral with equipment, provide combination starter disconnect with fused control transformer, hand-off-automatic selector switch, overloads in each phase, 2 normally open plus 2 normally closed auxiliary interlocks and pilot lights. Provide fused disconnect where required by equipment manufacturer. Provide phase failure relays for motors 10 horsepower and greater.
  - Single Phase: Less than 1/2 HP. Where disconnect is not integral with equipment, provide fractional horsepower thermal manual motor starting switch with single overload and pilot light.

- Motor Starters and Switches
  - Motor starters shall be 3 pole, 60 Hertz, full-voltage non-reversing (FVNR) magnetic type with.
  - Enclosures shall be rated NEMA 1 at interiors, NEMA 12 in Mechanical Rooms and NEMA 3R at exteriors, unless otherwise required.

Lighting Systems Expectations

Interior Lighting

Fixtures shall be energy efficient LED type and shall have 4,000K correlated color temperature (CCT) and minimum 0.85 color rendering index (CRI) or higher. Average rated lamp life shall be 50,000 hours minimum.

Drivers for LED lighting systems shall employ electronic technology for long life with frequent on-off operations. Systems shall be dimmable where indicated in Table “Illumination Levels and Controls”.

The interior lighting design shall meet or exceed Illuminating Engineering Society of North America (IESNA) recommendations.

Fixture types:

- Lighting in Court Rooms shall be glare free with consideration for vertical illumination, where required, for evidence displays. High CRI for Color rendering shall also be considered.
- Lighting fixtures in Detention Cells and Holding Cells shall be minimum security type and shall be located out of reach of detainees.
- Circulation spaces including vestibules, corridors, and other common areas, recessed troffer style fixtures shall be provided.
- Lighting in offices shall have full-distribution linear recessed LED fixtures.
- Conference/training and classrooms shall have full-distribution lighting fixtures.
- Lighting in Mechanical/Electrical and storage rooms shall have pendant mounted industrial fixture.

Exit signs shall identify path of egress and utilize LED technology with green lamps. Emergency lighting fixtures shall provide minimum 1.0' candles along the path of egress.

Exterior Lighting

The exterior lighting design shall meet or exceed IESNA (Illuminating Engineering Society of North America) recommendations of 1.0' candles average. The exterior lighting design shall also be compliant with IDA (International Dark-Sky Association) recommendations.

Parking Structure: fixtures rated for wet locations and Dark-Sky compliant. Lighting levels shall be 1-2fc average; lighting shall meet LEED light trespass requirements.

All exterior light fixtures shall utilize full cutoff style optics with no light emitting beyond 90 degrees from nadir; thus eliminating unwanted backlight, uplight and glare.

Luminaries shall utilize LED lamp sources with 4,000K correlated color temperature (CCT) and minimum 0.82 color rendering index (CRI) for exteriors. Luminaries in Parking Structure shall have integral motion sensor to enable 50% dimming during unoccupied periods. Lighting levels shall be increase at garage entrances during daylight hours to ease transition of drivers' pupils from daylight to artificial lighting levels.

Lighting Control

Due to the nature of the facility, and the potential threat to the public health and fire safety therefore control of interior lighting shall be controlled locally to prevent system-wide failure.

Lighting switches controlling Detention and Holding Cells shall be mounted outside of the cells. Lighting in Court Rooms shall be controlled by dimming switches at the Judges Bench area.

Ultrasonic and infrared (dual technology) occupancy sensors shall be utilized in all spaces. Daylight harvesting sensors shall be provided where applicable to dim electric lighting as natural daylighting increases. All controls shall comply with or exceed the International Energy Conservation Code (IECC).

Exterior lighting shall be energized via exterior photocell switch and de-energized via a 365-day programmable time clock located in the Mechanical/Electrical room.

Lighting Levels

Interior and exterior illumination levels and associated control systems for each class of space at the Court House are listed in the table on the following page.

The table includes average illumination to be provided; industry standard and user-recommendations for luminance and commentary for each space. Multiple levels of illumination or dimming shall be provided in most spaces.

Illumination Levels and Controls					
Room Type	Recommended average FC	Day Lighting	Motion Sensor	Other Control	Comments
Court Room Benches, Lecterns, Tables and Judicial Areas	50	No	No	Dimmer at Bench	
Courtroom Witness Stand	30	No	No	Dimmer at Bench	
Courtroom Jury Box	30	No	No	Dimmer at Bench	
Courtroom Public Gallery	10	No	No	Control at Bench	
Hearing & Conference Rms.	10-40	Yes	No	Dimmer	Low level for video, high level for reading.
Identification & Processing	50	No	Yes		
Detention and Holding Cells	20	No	No	Remote Switch	
Offices	50*	Yes	Yes	Local Multi-Level	Task lighting may be utilized to achieve space requirements
Common/support areas	15-20	Yes	Yes		

Vestibule/Lobby	20	Yes	Yes		
Storage Room	5-10	No	Yes		
Toilets	10-30	No	Yes		Lower general lighting. Higher illumination at fixtures and vanities.
Janitor and Storage	20	No	Yes		
Mechanical/ Electrical Rms.	30	No	Yes		
Break Rooms	30	Yes	Yes		
Vehicle Sally Port	10-20	Yes	Yes	Photocell & Timer	Low level at night, high level at daytime.
Exterior building entrances	5	Yes	No	Photocell & Timer	
Exterior drives & parking	1	Yes	No	Photo-cell & Timer	Minimum for personnel safety and building security.
Garage Entrance	1-5	Yes	No	Photocell	Low level at night, high level at daytime.

*Includes task lighting contribution. Energy consumption and Lighting Power Density (LPD) requirements are discussed in the LEED Credits paragraph.

Fire Alarm System

General Requirements

Provide a multiplex addressable voice-evacuation type Fire Alarm Control Panel (FACP) and fire alarm system throughout all portions of the building. The fire alarm system shall be a speaker and strobe type UL listed under Category UOJZ (control units) and SYZV (releasing – as applicable). The fire alarm system shall be a complete system as manufactured by Edwards Systems Technology, Notifier, Siemens, Simplex Grinnell, or approved equal. The fire alarm system shall comply with the ANSI A117.1 and National Fire Protection Association 72.

The Fire Alarm System shall include a fire alarm control panel (FACP) located in the main Mechanical/Electrical Room and a graphic Fire Alarm Annunciator Panel (FAAP) in the Vestibule of the main entrance and a remote annunciator panel in the Security Room.

Provide an integrated Fire Alarm system and Mass Notification System (MNS). The MNS shall Interface with the fire alarm system to utilize the voice modules, visual alarms, and speakers of the fire alarm system. An autonomous voice notification control unit shall monitor and control the notification appliance network and provide consoles for local operation. Authorized personnel shall be able to use a console to initiate delivery of pre-recorded voice messages, provide live voice messages and instructions, and initiate visual strobe and optional textual message notification appliances. The autonomous voice notification control unit shall temporarily override audible fire alarm notification while delivering mass notification messages to ensure they are intelligible.

The intent is to deliver either the pre-recorded messages or live voice messages and instructions to the speakers within the building. The system shall also be capable of sending alert messages to end users (recipients) via multiple delivery methods, including but not limited to the following: Audio-visual network alerts to computers via desktop pop-up, Text alerts to mobile phones and pagers, Text alerts to email clients, Text alerts to textual visible appliances, Alerts to visible appliances, Audio alerts to phones, Audio alerts to speakers, Audio alerts to existing wide-area or building voice and/or other MNS, Network alerts to any other IP-connected devices via standard XML and CAP protocols. The system is required to be capable of 100 separate/unique messages to notification appliances. Any system shall need to be compatible with the Maryland Judiciary Information System.

The MNS messaging system shall be capable of the following:

- Automatically distribute at least 100 simultaneous and unique messages to the appropriate notification appliances.
- Allow multiple operators to send messages simultaneously.
- Grant access for control to another control station if the location in control becomes inoperable and/or the authorized operator at that control station can no longer operate the control station.
- Send voice messages and text messages with an indication of the source of the message that can only be sent from the message source.
- Send alert messages to end users (recipients) via multiple delivery methods.
- Live announcements or prerecorded messages. Live messages shall take precedence over prerecorded messages.
- Notification appliance network shall consist of speakers and visual notification devices located to provide intelligible instructions throughout the building. Specific zones, such as courtrooms, shall be separated as necessary.
- Give priority to MNS announcements over other audible announcements of the system including fire alarm system in a normal or alarm state. When an announcement is activated during a fire alarm, fire alarm system functions shall continue in an alarm state, except for the output signals of the fire alarm audible and visual notification appliances.
- Comply with speech intelligibility requirements of National Fire Protection Association 72 as measured according to ANSI/ASA S3.2.
- Capable of overriding local control of speaker volume levels for emergency communications. Local controls shall be permitted to adjust volume levels of non-emergency signals only, such as, but not limited to, background music and convenience paging.
- Capable of providing separate messages to one individual building or to multiple buildings at any given time if the MNS serves more than one building.

- Capable of monitoring emergency notifications from multiple data sources (National Weather Service, Emergency Managers Weather Information Network, Naval Meteorology and Oceanography, and others as determined locally) and automatically send out notifications to designated facilities and personnel based on pre-defined rules.

Audible speaker/visible notification appliances shall be provided throughout the building. Audible visible notification shall be provided in all corridors, exit paths, toilets, lockers, and common areas. Horns, strobes, and combination horn/strobes shall be utilized. Utilize listed ceiling-mounted fire alarm devices to the extent possible. Wall-mounted notification devices are acceptable for locations where ceiling-mounted devices are not practical. Wall or ceiling-mounted notification devices shall be white. Provide supplemental fire alarm audible appliances in Mechanical Rooms and similar support rooms. All notification devices shall be installed in accordance with the requirements of National Fire Protection Association 72.

Smoke detectors shall be provided above the FACP and NAC panels and where required by Code. Provide smoke detection for elevator recall. Detectors shall be located in each elevator lobby within 21' of the door and in the Elevator Machine Room. Provide smoke detectors for the double interlock pre-action system releasing and door holder releasing service. Provide duct smoke detectors for air handling unit shutdown and smoke damper operation. Any duct smoke detector in alarm shall shut down the associated air handling unit.

Provide heat detectors in the Elevator Machine Rooms for power shunt. The heat detectors shall be located within two' of each sprinkler head. Heat detectors are not required in the elevator shaft if the elevator and shaft meet the limited combustibility requirements of American Society of Mechanical Engineers A17.1 and the sidewall at the bottom of the pit is installed within 2' of the pit floor. The ~~Contractor~~ Project Company shall be responsible for verifying the elevator and shaft construction and the location of the sprinkler head in the shaft.

Provide manual pull stations within 5' of all required exits. The manual pull stations shall be double action. Install the manual pull stations with the handles 42" above the finished floor. Provide covers over pull stations subject to damage. Single action pull stations shall be provided where covers are used.

Provide monitor modules to monitor all water flow switches, tamper switches, pressure switches, and kitchen hood suppression systems. Provide monitor modules to monitor the status of the emergency generator. Provide control modules to interface smoke dampers and magnetic door holders with the fire alarm system. Provide the required control modules and relays for elevator recall and power shunt.

All fire alarm wire shall be in conduit throughout. All fire alarm conduit shall be red and installed in accordance with the requirements of the NEC. All fire alarm circuits shall be 24-volt DC. Signaling Line Circuits shall be Style 4 and Notification Appliance Circuits shall be Style Y. Power wiring shall be 120-volt AC circuits.

Fire alarm signals shall be transmitted via an integral automatic digital telephone dialer to approved offsite underwriter’s listed central station monitoring agency who shall notify proper emergency forces personnel in the event of an alarm or trouble signal at the new courthouse.

The ~~Contractor~~ Project Company shall install all equipment in accordance with applicable codes, manufacturer's written instructions, and recognized industry practices. Contractor and Fire Alarm Equipment Distributor personnel shall be NICET-Certified or show comparable training and experience. After all equipment is installed, it shall be tested to demonstrate proper operation of performance and compliance with the specifications. Equipment not operating correctly shall be field-corrected or replaced. Systems shall be tested in accord with National Fire Protection Association requirements.

The building shall be provided with Broadband Distribution Antenna and Distributed Antenna System. Provide adequate cellular coverage in the building and first responders' radio coverage in the building.

9. PLUMBING SYSTEMS CRITERIA

9. Plumbing Systems Criteria

A complete system of plumbing shall be provided throughout the building and installed in strict accordance with all applicable codes and regulations, including the American Disabilities Act.

The plumbing systems shall consist of, but not limited to:

- Domestic Cold Water
- Domestic Hot Water with Recirculation
- Sanitary Drainage and Vent
- Storm Water and Overflow Drainage
- Fire Protection

Floor drains shall be required in, but not limited to, all mechanical rooms, restrooms, holding cells & detention corridors where prisoners may congregate. All floor drains shall have a trap primer.

All public fixtures shall have hands-free faucets, either connected to the electrical system or battery-powered. All faucets shall have stainless steel finish.

Plumbing fixtures located in holding cells shall be detention grade stainless steel, anti-ligature and vandal resistant. Plumbing fixtures located in all other areas shall be good commercial grade of institutional quality.

All domestic water components shall be certified “lead free”, NSF 61.

Domestic hot water shall be stored at 140° F, shall have a master mixing valve per National Standard Plumbing Code requirements and 1070 ASSE valves at point of use.

Domestic hot water return system shall be provided as required by the National Standard plumbing code.

Domestic water heaters shall be tank-type. Point-of use water heaters shall not be used.

Freeze proof wall hydrants shall be located at a maximum every 150' along the building’s perimeter.

Roof drains and overflow drains shall be provided and sized based on the National Standard Plumbing Code requirements.

Provide gas service for installation of Kitchen equipment and emergency generator.

Provide drainage system for the Animal Holding area.

Provide Commissioning Services for all plumbing systems including but not limited to domestic water system (cold water, hot water and hot water return), fire protection system, gas service and domestic hot water heating system.

10. FIRE PROTECTION SYSTEMS

10. Fire Protection Systems

The fire protection system shall be designed in accordance with all applicable National Fire Protection Association standards, Federal, State and local codes.

The fire protection system shall provide total protection by means of a wet pipe sprinkler system with the exception data/computer rooms, server rooms, areas where specialty electronics exist, special records, garages, sally ports, loading docks or any areas subjected to freezing which shall be provided with either a dry pipe or pre-action sprinkler system.

A pre-action sprinkler system shall be provided for all data/computer rooms and areas where specialty electronics or special records exist. A dry-pipe sprinkler system shall be provided for any area subjected to freezing which includes but not limited to garages, sally ports and loading docks. Electrical Closets can be protected by a wet-pipe sprinkler system. For small remote telecom, security and AV closets, they can be protected by a wet pipe sprinkler system.

Provide dry standpipe system for open air Parking Structure that meets requirements of National Fire Protection Association 14.

The fire protection system shall be provided with a backflow preventer to prevent backflow in the potable water system.

Fire department Siamese connections shall be provided and located as required by the Fire Department, with access as directed by the ~~Authority Having Jurisdiction~~ Fire Marshal .

Determine if a fire pump or on site water storage is required based on attached flow test and building design. If required, the fire pump shall be located in a separate fire pump room.

Each sprinkler zone shall have an isolation valve, check valve, drain, test assembly and flow switch. Sprinkler zones shall match the fire alarm zones.

All fire protection valves shall be supervised by the Fire Alarm System.

Holding cells and all areas within the Secure Perimeter shall employ anti-ligature institutional style sprinkler heads and smoke detectors.

Where required, stand pipes meeting the requirements of National Fire Protection Association 14 (latest edition) shall be provided in all egress stairwells. Standpipes shall include 2-1/2” hose valves.

Head guards shall be provided on all sprinkler heads located in the mechanical, electrical and equipment spaces.

Fire extinguishers shall be provided and located in accordance with National Fire Protection Association 10.

Provide a fire alarm annunciator panel at the building entrance as directed by the ~~Authority Having Jurisdiction~~ Fire Marshal . In addition, provide a remote fire alarm annunciator panel in the Security Room.

Provide kitchen hood fire suppression system for kitchen exhaust grease hoods in Cafeteria.

Memo to: Bureau of Utilities, DPW

From: Sydonia Garrott, P.E.
Dept. of Inspec., Lic & Permits

cc:
Dept. of Fire and Rescue

1708

Request for Water Supply Information

Test Location: **9250 Bendix Road**

Request Date: **September 18, 2017**

Inquirers Name and Company: **Peter J. Stone, Pennoni**

Address: **8818 Centre Park Drive, Suite 200, Columbia MD 21045**

Inquirer to be Notified of Test? **no** Telephone #: **443-537-2721**

Email: **pstone@pennoni.com**

Test Date 10/12/17 Test Time 12:00

Flow Location

F1 Hydrant # **2842-095** F2 Hydrant # **2842-027**

Static Pressures **100 psi** Residual Pressures **80 psi** Flow **1818.69** gpm

Flow gpm

Pitot Pressures **50 x 2 psi** Orifice Sizes **2.5 inches**

Water Tank **Jonestown – 610 ft.** Elevation **23.5+600=623.5 ft. 21.9**

Oakland Ridge – 608 ft. **23.9+600=623.9 ft. O/S**

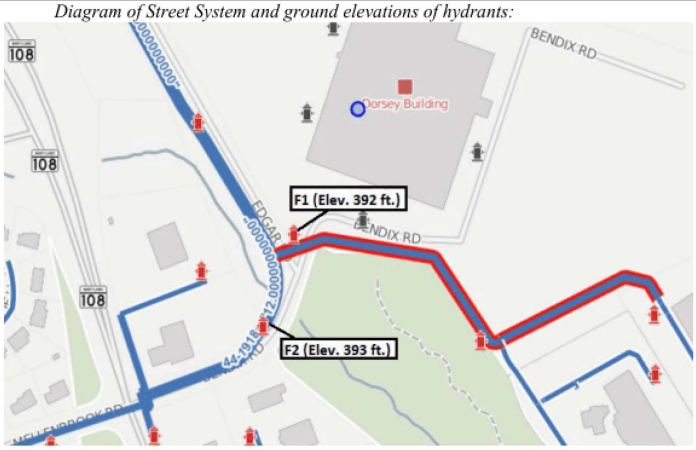
Water Zone **630 E** Water Main Size **12" (Cont. #44-1918)**

Test Conducted by: T. Pickett, R. Bailey

(644.4-609)=36.4*.433= 16psi

DESIGN TO:		
STATIC:	**84**	psi
RESIDUAL:	**64**	psi
FLOW:	**1818**	gpm
@ 20 PSI:	**3407**	gpm

Diagram of Street System and ground elevations of hydrants:



11. AUDIO VISUAL AND TELECOMMUNICATIONS SYSTEMS

11a. Telecommunications and Data Systems

Provide IP networks that are purpose built and cost effective and shall be easily scalable as customer needs increase in the future. A layered network environment shall be delivered which groups like functioned networks through net segregation. Connections shall be supplied so that restricted networks can be monitored.

Structured cabling shall be provided for multiple distinct networks. Coordinate with all organizations within the building for specific cabling requirements, including MDJIS (State), DTCS (county), Register of Wills and DJS. While the switching equipment for the two networks shall be provided by each entity, the vendor shall provide all vertical and horizontal distribution cabling as well as separate lockable racks for each network with patch panels and power. Coordinate cable jacket color requirements with each entity for their respective network. Cabling installations shall conform to BICSI standards.

~~The project company shall maintain a help desk location within the court house to support the communications and data systems. The help desk shall be available during normal Operating Hours to diagnose and repair issues.~~

Main Distribution Frame (MDF) (Server Room/Closet)

All main service shall enter the MDF location. Incoming service demarcation shall be supplied in two independent locations for redundancy but can be run to a single MDF location after demarcation. The MDF shall house the core network devices. Data and telephone service shall be distributed via multi-mode fiber optic cables to each IDF. Racks and cableways shall be provided with appropriate cable management accessories for organized cable routing within the MDF and to the IDF locations. Additional rack space shall be provided for County and State equipment.

Provide sufficient cooling for the system load within the MDF. The MDF equipment shall be provided with 24/7 uninterrupted power.

Provide a separate server room located near the IT department connected to the MDF via fiber optic cabling.

Intermediate Distribution Frame (IDF) (Telecom Closet)

Local IDF rooms shall be provided to address Category 6 cable distance requirements. Outlets shall not exceed 300' from the closest IDF. Fiber backbone/riser cable shall connect each IDF to the MDF. All local tele/data outlet cabling shall be terminated in the nearest IDF on the same floor. Patch panels and cable management shall be provided in each equipment rack as required for organized cable routing. Additional rack space shall be provided for County equipment.

Provide sufficient cooling for the system load within each IDF. The IDF equipment shall also be provided with 24/7 uninterrupted power.

Telephone System

The telephone system shall be sized to support the equipment provided by the county. Analog telephone shall be provided at the security desk, control rooms, and the judges' chambers as an emergency phone system in the case of an extended power outage. Additionally, provide analog phone lines to all facsimile capable copier locations. All other phones and telephone network connected devices within the building shall be part of a VoIP based system.

Wireless Data Access

Ceiling mounted wireless access points (WAPs) shall be provided in enclosures with tele/data outlet and category-6 cabling to the nearest IDF. WAPs shall be provided throughout all public and non-detention staff areas with sufficient coverage and throughput to service the anticipated loads. Separate secure and public networks shall be provided to logically segregate traffic. Public network traffic shall be monitored.

Telephone and Data Outlets

The outlets provided shall include connections necessary for the function of the area plus spare for future expansion. The following shall be the typical for outlets provided at the named locations. The following list is not all inclusive, refer to the room data sheets for additional requirements:

- Judge's/Judges' Bench – Provide unrestricted data and communications lines.
- Attorney/Client Conference Rooms – Provide data and communications lines with access to a restricted, monitored network.
- Jury Deliberation - Provide data and communications lines with access to a restricted, monitored network.
- Jury Assembly - Provide data and communications lines with access to a restricted monitored network.
- Judge's Chambers – Provide data and communications lines to both the restricted and unrestricted networks.
- Typical Offices – Provide data and communications lines to both the restricted and unrestricted networks.
- Gallery News Reporter – Provide connections to and a broadcast antenna for news media use.
- Media Room – Provide sufficient data outlets and Wi-Fi coverage shall be provided in the media room to accommodate a large volume of concurrent users.

Telephone and data outlets shall be provided for all desk and workstation locations, copiers, printers, and servers or other network attached devices not housed within the MDF or IDFs. Wall outlets shall be provided where movable equipment or furniture is located. Floor box outlets shall be provided for all locations where the equipment or furniture is not adjacent to or within patching distance of a wall. Outlet locations shall be coordinated with associated power outlets. Provide each desk location with one telephone and one data connection. Coordinate with the County and State to determine which offices/desks are connected to which network. Coordinate outlet locations for all furniture provided by the County ~~and State.~~

In-building Radio

In-building radio reinforcement shall be provided to cover all areas within the court house. A distributed antenna system shall support all 800 MHz radio use for the Sheriff's Department, Police, and first responders (Fire and EMS). Provide a donor antenna on the roof as well as distribution and amplification within the building.

11b. Audio Visual Systems

Courtroom Technology

The systems below shall compliment the functions of the courtrooms, hearing rooms, and grand jury room. Devices and technologies listed below are typical and shall be provided in courtrooms, hearing rooms, and grand jury room here the associated function is used. This is typical for all Large, Standard, and Civil Courtrooms, as well as the Orphan's Courtroom, all Hearing Rooms, the Grand Jury Hearing Room, and the Settlement Conference Room. Refer to the Room Data Schedule for details of each room, and coordinate A/V requirements with the detailed room requirements for each room type. All courtroom technology shall integrate with the digital audio recording system, the Maryland Electronic Courts (MDEC) system, and the teleconferencing systems.

- The courtrooms shall have a complete fixed A/V evidence presentation system.
- Touchscreen Control System: Remote control shall be provided for video projection, and sound control. Touch-screens shall be provided at each Judge's Bench and one other location within each room.
- Smartboard lectern units: LCD monitors with annotation digitizer shall be installed at the council tables and witness box to provide the attorneys and witnesses video feedback and the capability for annotation of images without using a full sized smartboard.
- Video Projector and Ceiling Mounted Projector Screen: A ceiling mount, 4,500 lumen, LCD type video projector and ceiling mounted projector screen shall be provided for large scale display of video and general viewing.
- Local LED monitors: Smaller flat screen monitors and a video distribution system shall be integrated into the jury box and allow up-close viewing of video presentations to improve clarity of fine details. The local LED monitors and computers for the Judge(s), Clerk, and Court Reporter stations in each courtroom shall be provided by the County. Provide integration between these MDEC stations within each room and the A/V system in each room for fully integrated room A/V systems.
- Video Arraignment: Video arraignment capability shall be provided in each courtroom. The video arraignment system shall be compatible with the existing systems used by the County and MD JIS. Coordinate with the County
- to determine the use of a fixed or cart-based system and provide equipment and infrastructure to support the chosen methods in each court room.
- Document Camera (Digital Overhead): Shall allow for display of printed documents and 3D objects on video displays. Provide power, signal, and control cabling.

- Media Input: Blu-ray, DVD, CD, VHS, VGA, 3.5 mm TRS, HDMI, USB, and wireless media display devices and connections shall be accepted.

- Sound System: The sound system shall include ceiling-mounted speakers, and furniture mounted or free standing microphones. Inputs and interfaces for production/conference type sound reinforcement equipment shall be provided.

- Digital Audio Recording: Software, servers, microphones, digital audio matrix mixers/ processors, and other related equipment shall be provided to record all courtroom audio. Separate storage shall be provided by for each entity requiring audio recording. The digital audio recording system shall be the latest version of For the Record (FTR) to be fully compatible with the County's existing recording systems. The system shall include sixty (60) licenses for the County's use - coordinate with the County to install FTR software and licenses on County computers.

- Infrastructure for Communication: The courtrooms shall be equipped with a local network with outlet at the Judge's/Judges' Stand, Clerk's Station, Court Reporters Station, Witness Box Lectern, Counsel Tables and Jury box.

- Power Requirements: Provide the A/V devices, control system and sound system electric power in the A/V Equipment rack. The Video projector shall receive electric power in the ceiling. Power outlets shall be provided near to both the Network and Communication outlets and A/V interface points at the Judge's/Judges' Stand, Clerk's Station, Court Reporters Station, Witness Box Lectern, Counsel Tables and Jury box. All power shall have an isolated ground.

- Equipment Racks: Audio/Video equipment shall be installed in lockable 19" equipment racks. When the equipment rack is located in the courtroom, it shall be integrated with the finish casework.

Courtroom Controls

Infrastructure shall be provided for the courtroom A/V technology controls. Coordinate with the County/State's vendor for infrastructure requirements to support touchscreen or push button controls for each function. The following control functions shall generally be available at both touch screen control stations within each courtroom. Coordinate with the County to determine if any control functions shall only be available at certain stations.

- System Power: This control shall turn system on and off.

- Lights: This control shall allow adjustment of light levels if dimming or lighting control systems provided.

- Control System Override/Disable: This control function shall allow the judge to disable the other touchscreens in the courtroom. Enabling this function shall allow only the judge's touchscreen to operate the system.

- Blank Video screen: This control shall display a blank screen on all video monitors to censor inappropriate materials.

- Mixer Level Controls: This control shall allow adjustments to the individual microphone levels.

- Microphone Mute: This control shall allow the selected microphone to be muted.

- Video Device/Audio Device Selection: This control shall allow the user to select a device for playback. Once a device is selected the system shall display the device controls and automatically adjust the system as need to use the selected device.

- Video/Audio Device Controls: Standard Play, Stop, Pause, Fast Forward and Rewind controls shall be provided for all devices controlled by the system.

- Bench Conference Mode: This function shall mute all microphones except the judge's/judges' and send sound masking to selected audio zones such as the jury box to allow a greater level of privacy for bench conferences. Sound masking shall integrate with the audio recording system.

- Cough button: This function shall momentarily mute the local microphone.

- Annotate Video: This function shall activate the smartboard features.

- Judge's Pre-review: The judge's/judges' bench shall be equipped with local playback capabilities of all media for review prior to display to the court room.

All Conference Rooms, Training Rooms, Muster Room, Interview Rooms, Multipurpose Rooms, and Marriage Ceremony Space A/V

The following system equipment, infrastructure and functions shall be provided for presentation purposes in each conference room, training room, and muster rooms:

- Control System: A fixed button control panel shall be provided at the presentation point for control of system power, input selection, and audio controls.

- LED Monitor: A wall mounted LED monitor shall be provided for display of video. Coordinate to provide the appropriately sized monitor based on the room size - refer to the Room Data Schedule for details.

- Video/Audio Playback Devices: A/V inputs to the system shall be provided at the presentation point.

- Sound System: The sound system shall include ceiling mounted speakers and audio inputs at the presentation point. Coordinate to provide sound system sized appropriately based on the room size - refer to the Room Data Schedule for details.

- Video Conferencing System: The video conferencing system shall include pan - tilt - zoom video conferencing camera, integration with the sound system, and integration with the existing video conferencing systems of the County and MDJIS for each conference room, training room, and muster room.

- Power Requirements: The A/V devices, control system and sound system shall be provided electric power in the A/V equipment rack. The LED monitor shall be powered in the wall. All power shall have an isolated ground.

- Equipment Mounting: A/V equipment shall be installed in lockable equipment enclosures that shall be coordinated with furniture. If furniture does not allow for A/V equipment mounting, the equipment shall be mounted in appropriately rated enclosures above the finished ceiling.

- Cable television outlets shall be provided for input to the A/V system.

Judicial Conference Room and Jury Deliberation Rooms

The baseline A/V requirements for the Judicial Conference Room and the Jury Deliberation Rooms shall be the same as the A/V requirements for all other Conference Rooms. In addition to those requirements, the Judicial Conference Room and Jury Deliberation Rooms shall also be provided with access to the MDEC system.

Jury Assembly Waiting Room

The Jury Assembly Waiting Room shall be equipped with an A/V system with the capability to show cable television and to provide orientation and management for jurors, including playing instructional videos for viewing by all jurors and making announcements.

- Large displays shall be provided in sizes and quantities as required to provide comfortable viewing from all seats within the room.

- Sound system shall be provided as required to provide clear and comfortable listening from all seats with the room. Provide assistive listening system.

- Provide microphones as required to provide audio reinforcement for a person giving instructions and/or making announcements.

- Provide integration with the cable television system.

- Provide touch screen control system for control of all room A/V devices.

A/V System Cabling

Provide all cabling to support the functions listed above. All media content over twisted pair shall be provided with shielded twisted pair cabling.

Evidence Viewing Room

The Evidence Viewing Room provided near the entrance of the building shall be equipped to display evidence and case information. Provide local workstations where members of the media have access to select files and documents. The files and documents shall be capable of being viewed locally and saved via USB drives or upload to online file transfer services.

Cable TV

The following locations shall be provided with cable television. Channel, volume, and power controls shall be provided locally through standard television remote controllers. Additionally, the monitors shall be connected to an IP based digital signage system for the transmission of messages and the Docket Display (by Infax).

- Break Rooms

- Jury Assembly Rooms

- Waiting Areas

- Judge's Chambers

Docket Display

The following areas shall be provided with monitors connected to the Infax docket display system to display case names and assignments. All equipment including monitors, servers, and all connectivity shall be provided.

- Building Entrance
- Elevator Lobbies
- Waiting Areas
- Courtroom Entrances

ATTACHMENT 4A - TRAFFIC IMPACT STUDY

TRAFFIC IMPACT STUDY

HOWARD COUNTY COURTHOUSE
9250 Bendix Road
Howard County, Maryland

Revised February, 2018
November, 2017



J. K. Schmid
2/24/2018

Prepared For:
Pennoni Associates, Inc.

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TRAFFIC CONCEPTS, INC.
7525 Connelley Drive
Suite B
Hanover, Maryland 21076
Phone 410-760-2911
Fax 410-760-2915

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APPENDIX I	CRITICAL LANE ANALYSIS CALCULATIONS
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INTRODUCTION

The Howard County Courthouse Traffic Impact Study dated November 2017 is revised with this document. This revision expands the impact area to include the MD 175 (Rouse Parkway) @ Thunder Hill Road intersection.

The Howard County Courthouse project site is located at 9250 Bendix Road Columbia, Maryland. This location is owned and operated by Howard County Government. The County proposes to raze the existing County building and construct a 240,000 gross square foot (gsf) County Courthouse building. Additionally, the County may build a 200,000 gsf office building, possibly within 10 years, on this site. Therefore, this study includes the peak hour traffic generated by the proposed County Courthouse and potential traffic generated by a future County office building. The site location and the key study intersections are depicted on Exhibit 1.

As required by Howard County, this study meets the traffic impact study guidelines contained in Chapters 4 and 5 of the Howard County Design Manual Volume III (Road and Bridge Design). Specifically, Chapter 4 addresses the Traffic Impact Study related to the County's Adequate Road Facilities Test Evaluation requirements. Chapter 5 provides Traffic Impact Study guidelines for projects that generate greater than 100 peak hour trips.

The key study intersections as determined by the County are the intersections located in all directions from the site but not greater than 1.5 road miles from the proposed site. The first intersection identified as a major collector roadway or higher with major collector road or higher is analyzed. The Chapter 5 definition of a key intersection is an intersection located within ½ mile radius from the site. Generally, local roadways are not analyzed unless known intersection capacity issues exist.

The required level of service standards (LOS) are a "D" for County controlled intersections and an "E" for State controlled intersections. The intersection level of service is determined with the Critical Lane Volume (CLV) methodology. The study impact area is comprised of the following intersections:

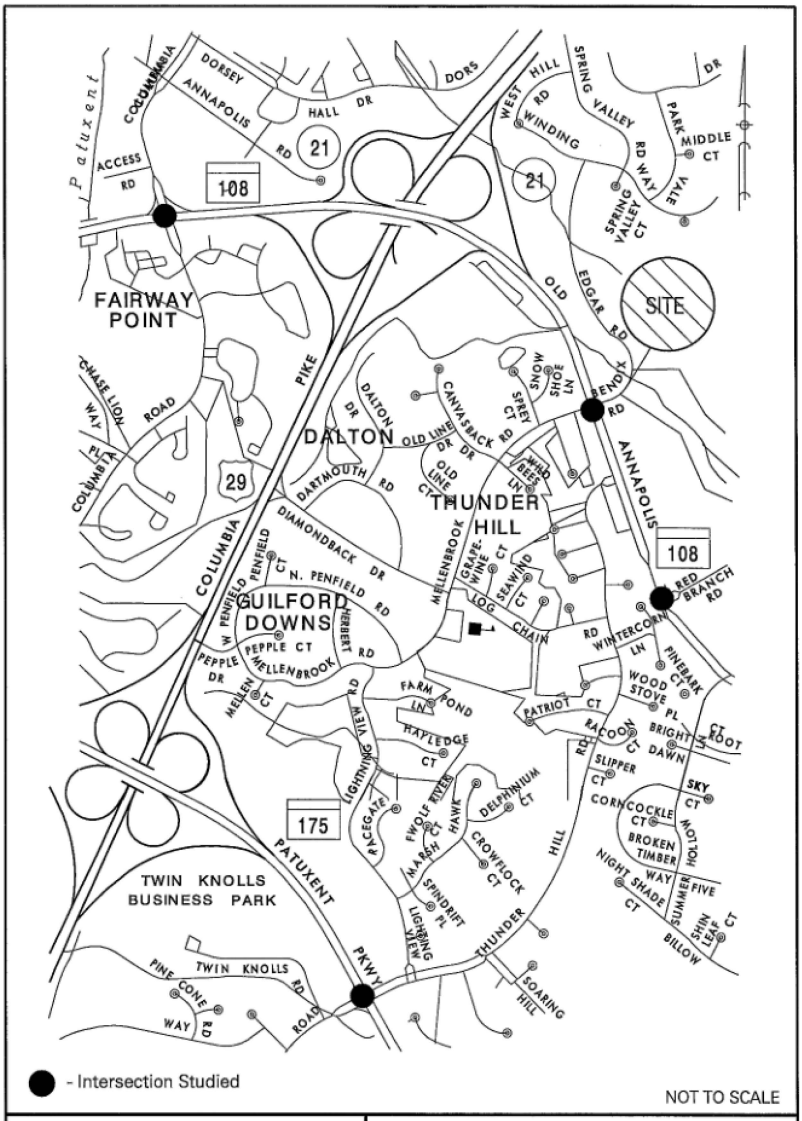
Key Intersections

- MD 108 (Clarksville Pike) @ Columbia Road (Signalized)
- MD 108 (Old Annapolis Rd) @ Mellenbrook Road/Bendix Road (Signalized)
- MD 108 (Old Annapolis Rd) @ Red Branch Road (Signalized)
- MD 175 (Rouse Parkway) @ Thunder Hill Road (Signalized)

The level of service analysis was conducted with three analysis conditions that include an existing, background, and future traffic condition. The existing traffic condition was established with peak hour intersection turning movement counts that were conducted during the weekday morning (7:00 AM - 9:00 AM) and evening (4:00 PM – 6:00 PM) peak hours. The intersection counts are used to establish the baseline intersection level of service conditions.

The background traffic condition includes peak hour trips generated by background developments and by a traffic growth rate. A background development is any development located within the impact area that is approved, but not constructed. The background traffic growth rate is defined the County Design Manual.

The future traffic condition determines the site's new peak hour traffic volumes. According to Chapter 5, the future traffic condition must also include a twenty (20) year planning horizon. The 20-year planning horizon is created by applying growth rates to the existing traffic volumes. This method of forecasting future traffic volumes is only used as an indication of how intersections could perform under ultimate build out conditions.



TRAFFIC CONCEPTS, INC. 7525 Connelley Drive Suite B Hanover, Maryland 21076 410-760-2911	EXHIBIT 1 Site Location Map

3

EXISTING CONDITION

The existing traffic condition establishes the weekday AM and PM peak hour intersection levels of service using current intersection turning movement counts. The traffic counts were performed at the following intersections.

Key Intersections

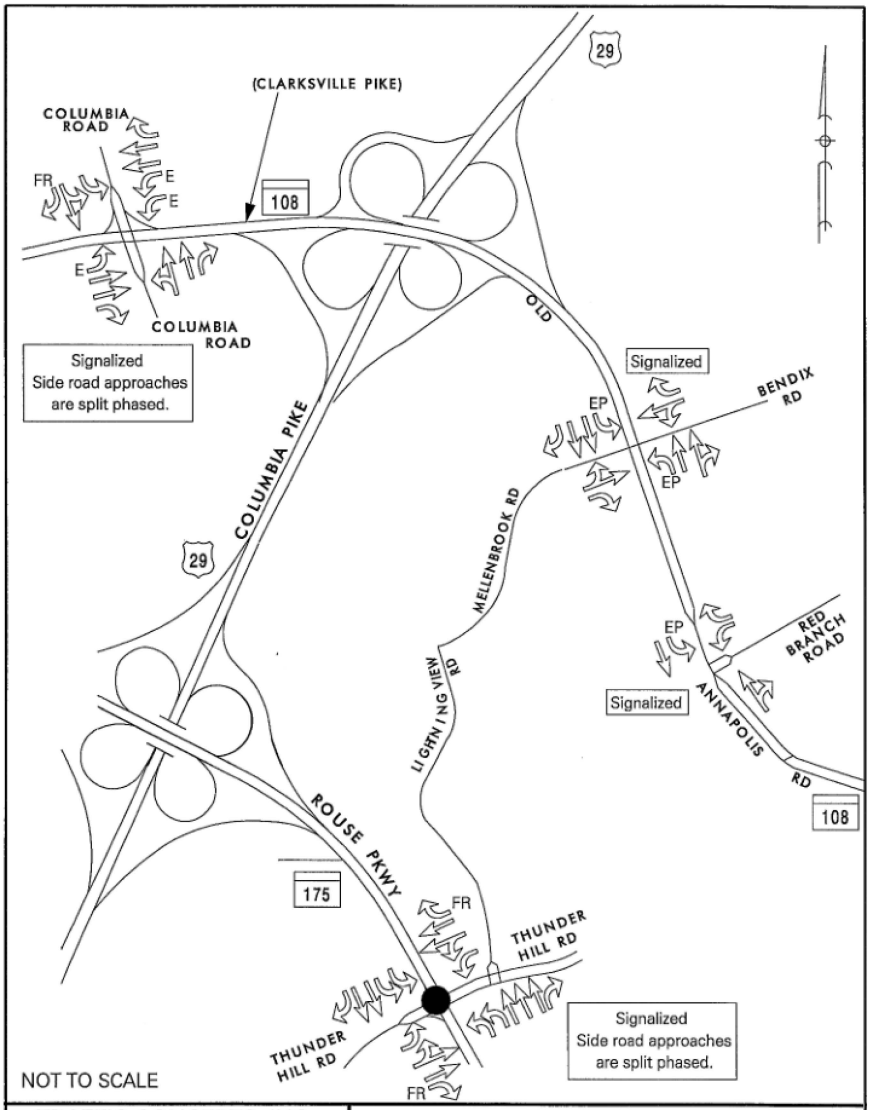
- MD 108 (Clarksville Pike) @ Columbia Road (Signalized)
- MD 108 (Old Annapolis Rd) @ Mellenbrook Road/Bendix Road (Signalized)
- MD 108 (Old Annapolis Rd) @ Red Branch Road (Signalized)
- MD 175 (Rouse Parkway) @ Thunder Hill Road (Signalized)

The existing lane use configuration for each key intersection is identified on Exhibit 2. The detailed intersection configuration sketches are provided in the appendix section of this report. The weekday peak hour traffic volumes are displayed on Exhibit 3 and the traffic volume counts are included in Appendix II of this report.

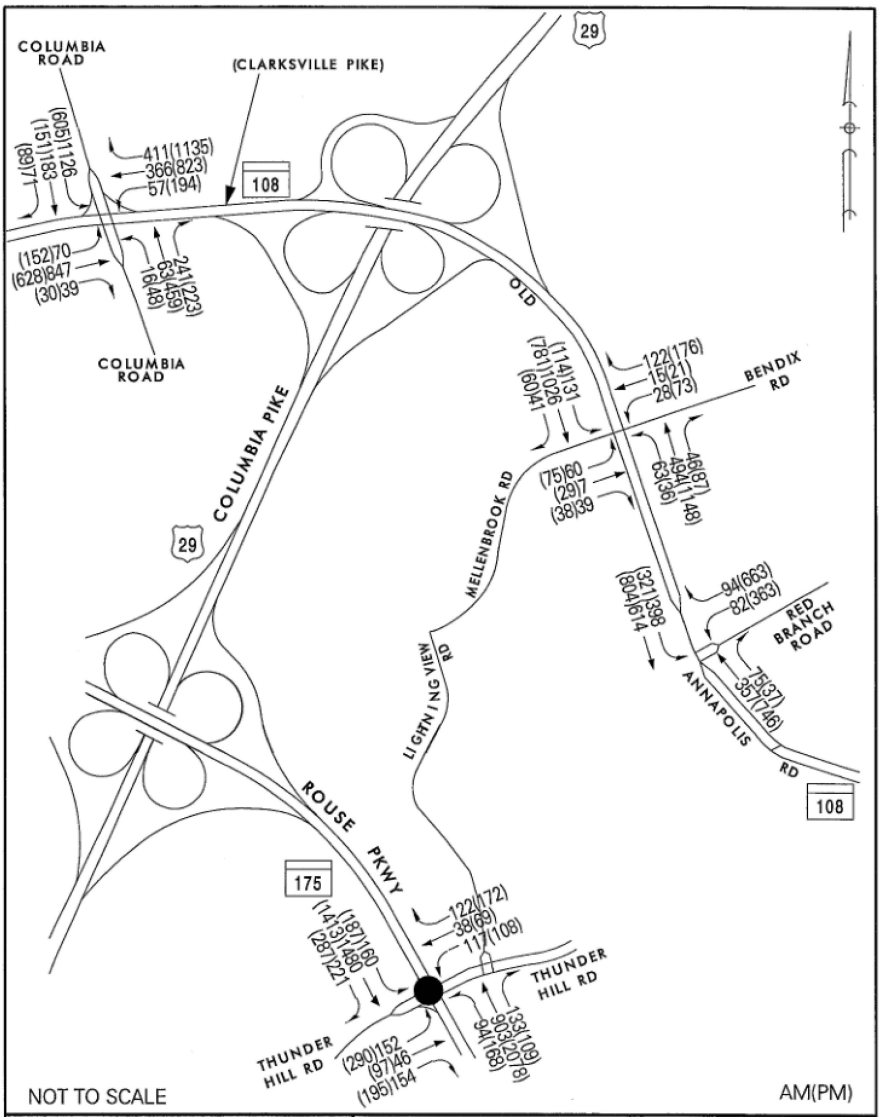
The existing intersection capacity analyses results are displayed below and the CLV calculations are provided in Appendix I.

CRITICAL LANE ANALYSIS

	AM CLV(LOS)	PM CLV(LOS)
MD 108 @ Columbia Road	1492(E)	1338(D)
MD 108 @ Mellenbrook Road/Bendix Road	733(A)	978(A)
MD 108 @ Red Branch Road	912(A)	1467(E)
MD 175 @ Thunder Hill Road	1011(B)	1169(C)


(CLARKSVILLE PIKE)
29
COLUMBIA ROAD
FR
E
E
E
108
COLUMBIA ROAD
Signalized
Side road approaches
are split phased.
OLD
Signalized
BENDIX RD
EP
EP
COLUMBIA PIKE
29
MELLENBROOK RD
EP
RED BRANCH ROAD
LIGHTNING VIEW RD
Signalized
ANNAPOLIS RD
108
ROUSE PKWY
175
FR
THUNDER HILL RD
THUNDER HILL RD
Signalized
Side road approaches
are split phased.
FR
NOT TO SCALE
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410-760-2911
EXHIBIT 2
Existing Lane Configuration

5



TRAFFIC CONCEPTS, INC. 7525 Connelley Drive Suite B Hanover, Maryland 21076 410-760-2911	EXHIBIT 3 Existing Traffic Volumes

6

BACKGROUND CONDITION

The background traffic condition is created with vehicle trips generated by nearby developments that have preliminary plan approvals and with the County mandated growth rates.

The background developments were determined by reviewing Howard County site and subdivision records. The background development research revealed a single residential development known as Jordan Overlook that is planned with 4 single family units. The minimal peak hour traffic generated by four single family units is accounted for in the traffic growth rates as described below.

The County required traffic growth rate of 3.0 percent is applied to all intersection movements along public roadways over a three (3) year period. The peak hour traffic increase resulting from the growth rates is shown on Exhibit 4.

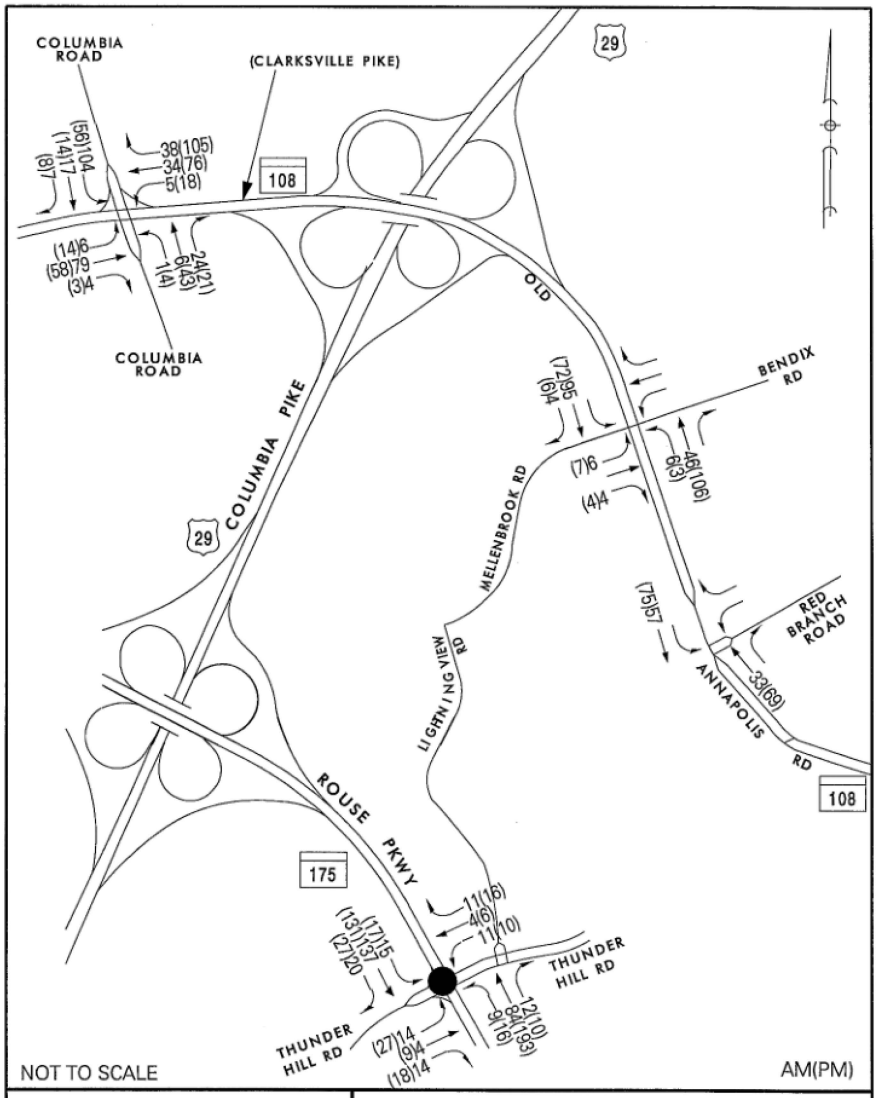
We then combined the existing traffic volumes with traffic generated by the growth rates to arrive at the total background traffic volumes (Exhibit 5).

Total Background Traffic = Existing Traffic + Growth Rates + Background Development Traffic

The total background intersection volumes calculated at the key intersections were analyzed with the CLV analysis method. The intersection capacity results are displayed below and the CVL calculations are provided in Appendix I.

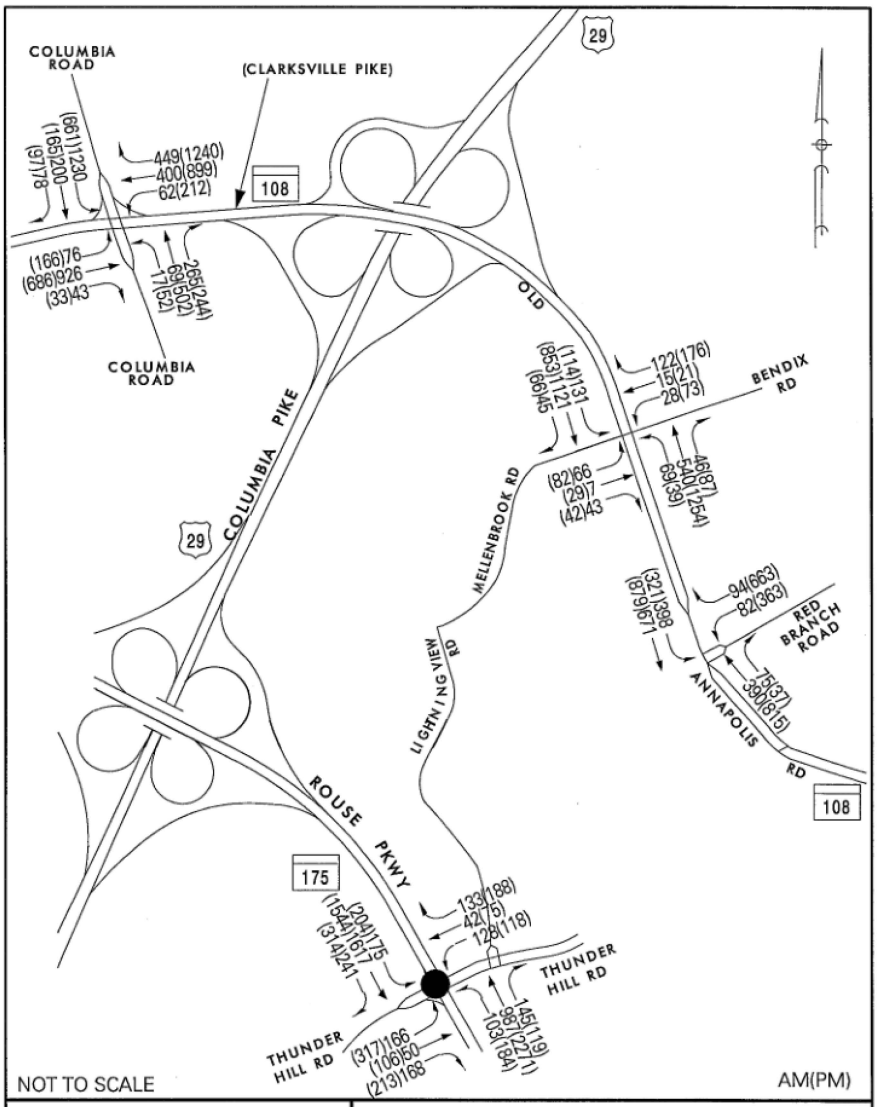
CRITICAL LANE ANALYSIS

	AM CLV(LOS)	PM CLV(LOS)
MD 108 @ Columbia Road	1633(F)	1461(E)
MD 108 @ Mellenbrook Road/Bendix Road	798(A)	1044(B)
MD 108 @ Red Branch Road	945(A)	1536(E)
MD 175 @ Thunder Hill Road	1105(B)	1277(C)



TRAFFIC CONCEPTS, INC. 7525 Connelley Drive Suite B Hanover, Maryland 21076 410-760-2911	EXHIBIT 4 Projected Growth Rates (3.0% for Three Years)

8



TRAFFIC CONCEPTS, INC. 7525 Connelley Drive Suite B Hanover, Maryland 21076 410-760-2911	EXHIBIT 5 Total Background Traffic Volumes

9

FUTURE CONDITION (2020)

The future traffic condition determines the new weekday peak hour trips generated by the proposed 240,000 gsf County courthouse building. As previously stated, this analysis also includes future peak hour trips generated by a 200,000 gsf County office building that may be built within ten years. The total traffic volumes were established with the following methodology:

Total Future Traffic = Existing Traffic + Growth Rates + Approved Background Traffic + Site Generated Traffic

The Institute of Transportation Engineers', Trip Generation Manual, 9th Edition is used to determine peak hour site generated traffic. However, the ITE manual does not contain trip generation data for a courthouse building. Therefore, the trip rates for the County Courthouse were determined with actual traffic data contained in a report conducted by Traffic Concepts, Inc. entitled *Howard County Circuit Courthouse Parking & Circulation Analysis, January 2015.* The above referenced report includes the following data:

Existing Howard County Courthouse Building = 80,439 gsf
Weekday Morning Peak Hour parking Demand = 189
Weekday Afternoon Peak Hour parking Demand = 160

Peak Hour Trip Rates (Per 1,000 GSF of floor Area)
AM Peak Hour Trip Rate: 2.35 trips per 1,000 gsf = 189 parked vehicles/80.439 gsf
PM Peak Hour Trip Rate: 1.99 trips per 1,000 gsf = 160 parked vehicles/80.439 gsf

Proposed New Courthouse Peak Hour Trips
AM Peak Hour Trips: 564 = 2.35 trips x 240.00 gsf
PM Peak Hour Trips: 477 = 1.99 trips x 240.00 gsf

	AM		PM	
	IN	OUT	IN	OUT
County Courthouse				
Per ksf	2.115	0.235	0.643	1.347
240,000 gsf	**508**	**56**	**154**	**323**

Note: The trip distribution (Inbound/Outbound) is based on traffic counts conducted at the existing Howard County Courthouse. The trip generation data from this study is included in Appendix III.

The peak hour trip generation for the future County office building was determined using the Institute of Transportation Engineers', Trip Generation Manual, 9th Edition (ITE). The ITE rates for a County office building (LUC 730) were examined and found to have inadequate data. Therefore, the trip generation rates associated with a Corporate Headquarters Building (LUC 714) was used instead. Since traffic generated by the existing County office building is accounted for in the key intersection counts, these trips were subtracted from the forecasted new office peak hour trips. The existing County office traffic count is included in Appendix III.

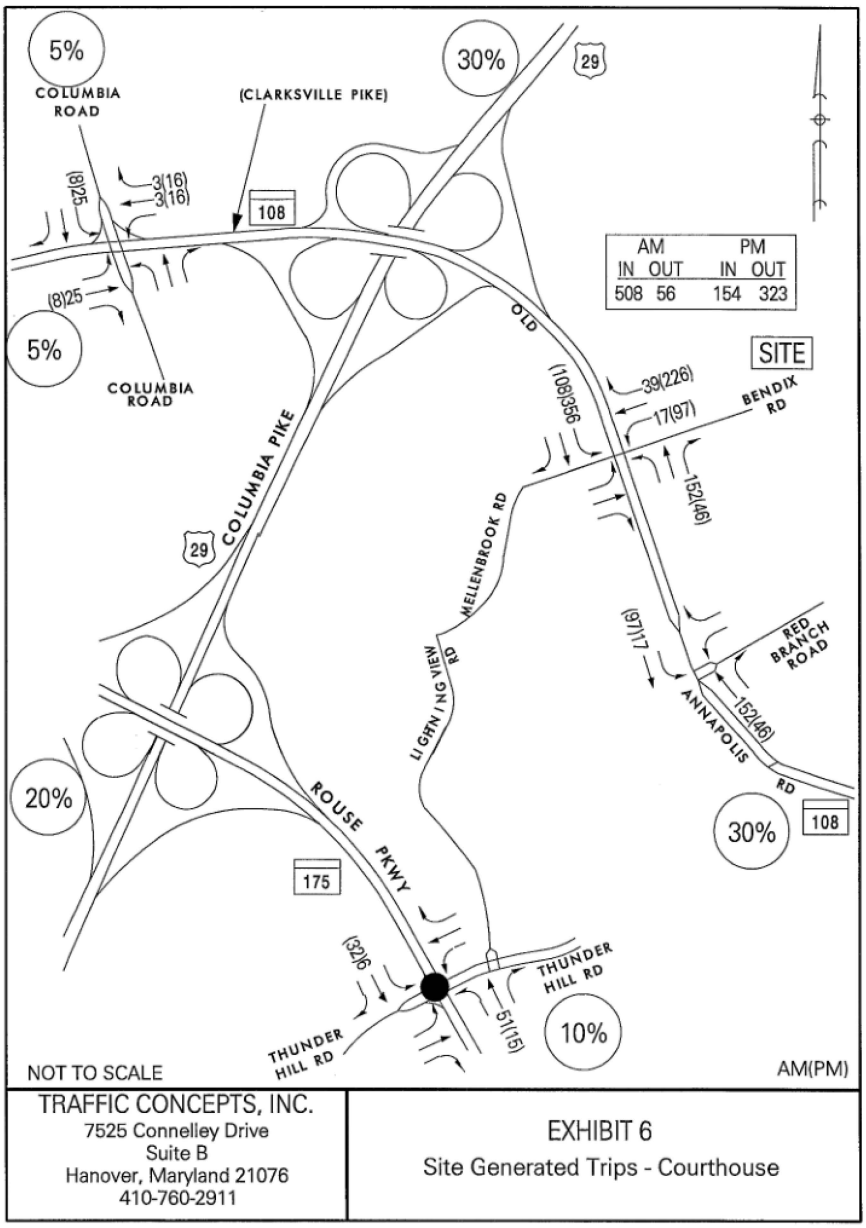
County Office ITE Land Use Code 714				
200,000 gsf	274	21	28	254
Less Existing Site Trips	- 115	- 40	- 13	- 95
Total New Office Trips	**159**	**0**	**15**	**159**

The new site generated traffic was distributed and assigned to the key intersections using existing traffic patterns and our knowledge of the study area. A separate trip distribution pattern was established for each use, which are shown on Exhibits 6 and 7.

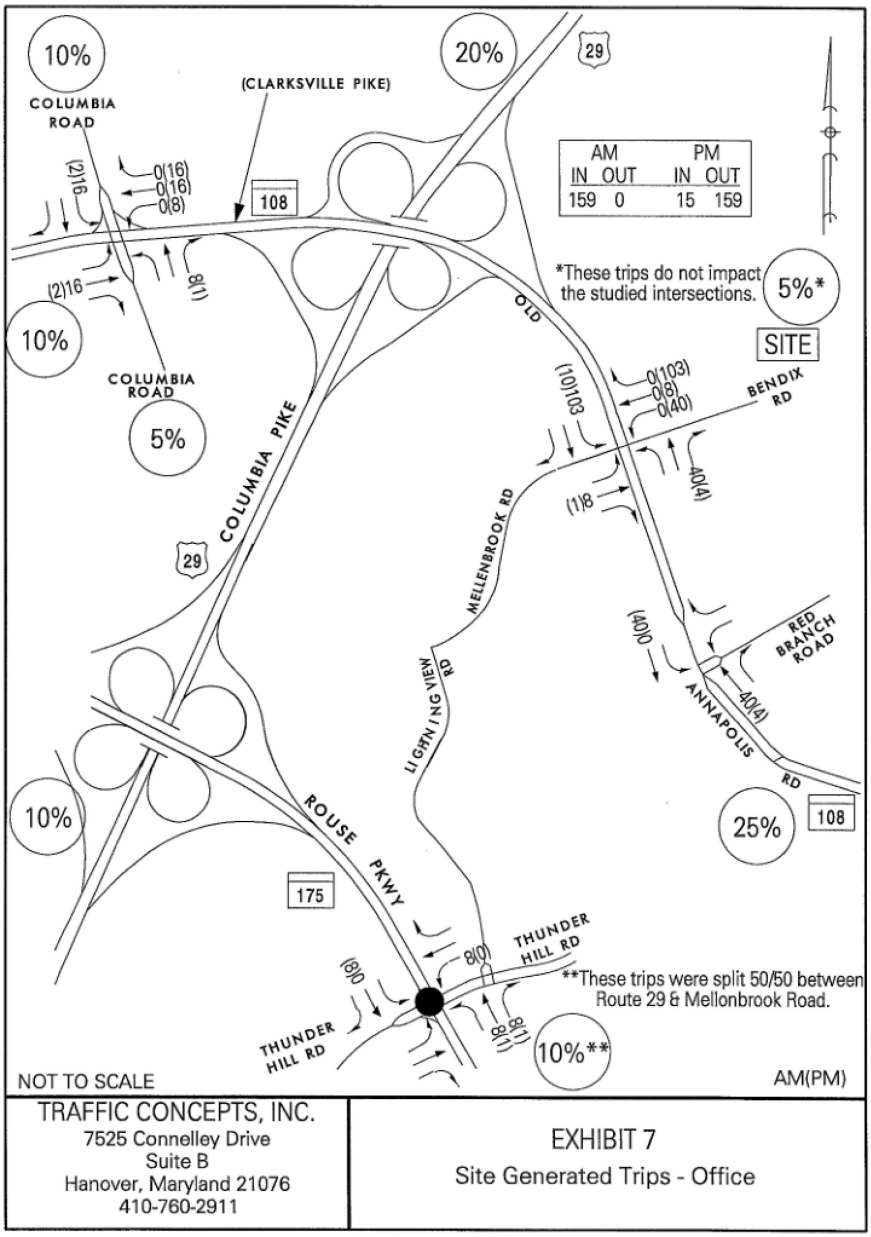
The total future traffic volumes shown on Exhibit 8 are created by adding the site generated trips (Exhibits 6 & 7) to the total background traffic volumes (Exhibit 5). The key intersections were analyzed under the total traffic condition with the resulted presented below. Details of the calculations are provided in Appendix I.

CRITICAL LANE ANALYSIS

	AM CLV(LOS)	PM CLV(LOS)
MD 108 @ Columbia Road	1688(F)	1485(E)
MD 108 @ Mellenbrook Road/Bendix Road	1151(C)	1401(D)
MD 108 @ Red Branch Road	1137(B)	1585(E)
MD 175 @ Thunder Hill Road	1111(B)	1283(C)

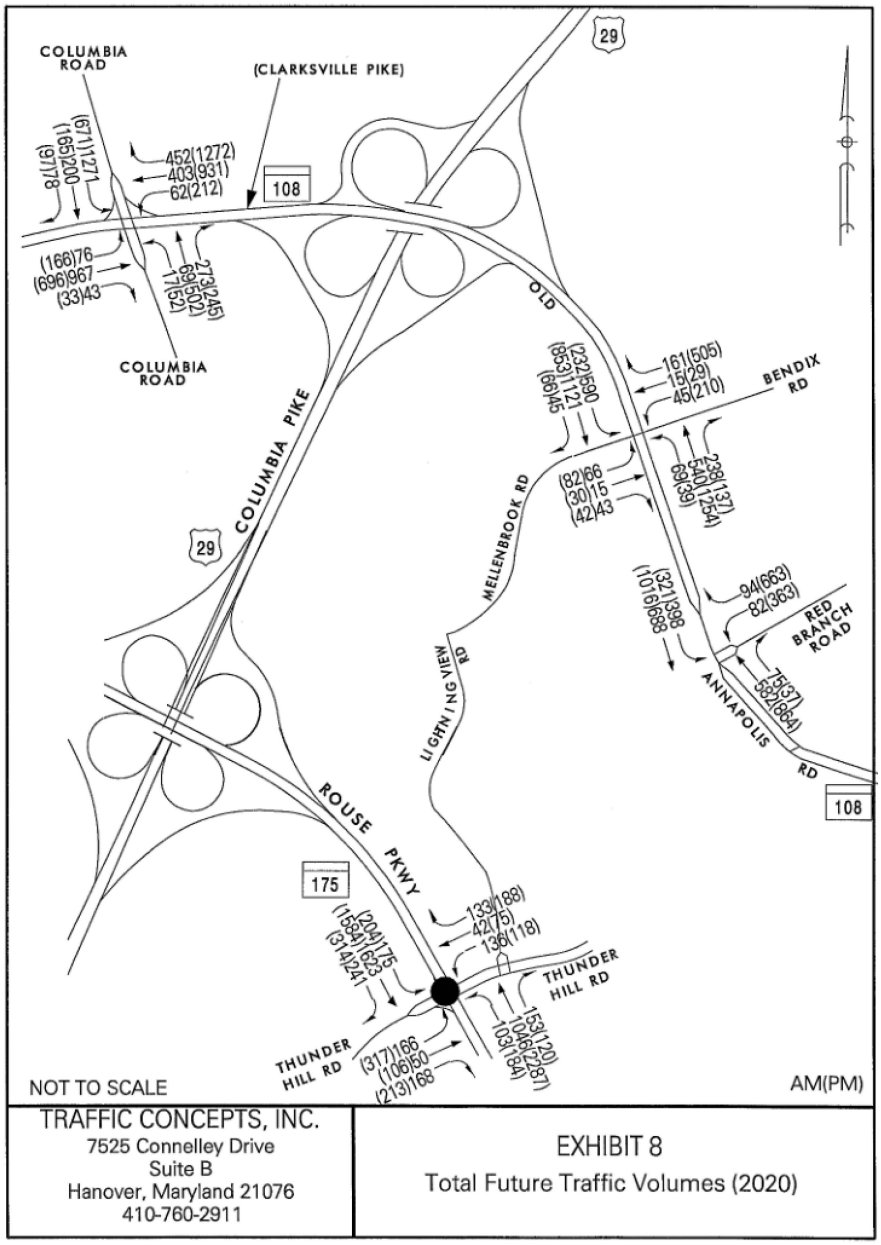

5%
COLUMBIA ROAD
(CLARKSVILLE PIKE)
30%
29
108
(8)25
3(16)
3(16)
(8)25
5%
COLUMBIA ROAD
AM IN OUT
508 56
PM IN OUT
154 323
SITE
OLD
(108)356
39(226)
17(97)
BENDIX RD
152(46)
COLUMBIA PIKE
29
MELLENBROOK RD
LIGHTNING VIEW RD
(97)117
RED BRANCH ROAD
ANNAPOLIS RD
152(46)
108
30%
20%
ROUSE PKWY
175
(32)6
THUNDER HILL RD
51(115)
10%
THUNDER HILL RD
NOT TO SCALE
AM(PM)
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410-760-2911
EXHIBIT 6
Site Generated Trips - Courthouse

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TRAFFIC CONCEPTS, INC. 7525 Connelley Drive Suite B Hanover, Maryland 21076 410-760-2911	EXHIBIT 7 Site Generated Trips - Office

13



TRAFFIC CONCEPTS, INC. 7525 Connelley Drive Suite B Hanover, Maryland 21076 410-760-2911	EXHIBIT 8 Total Future Traffic Volumes (2020)

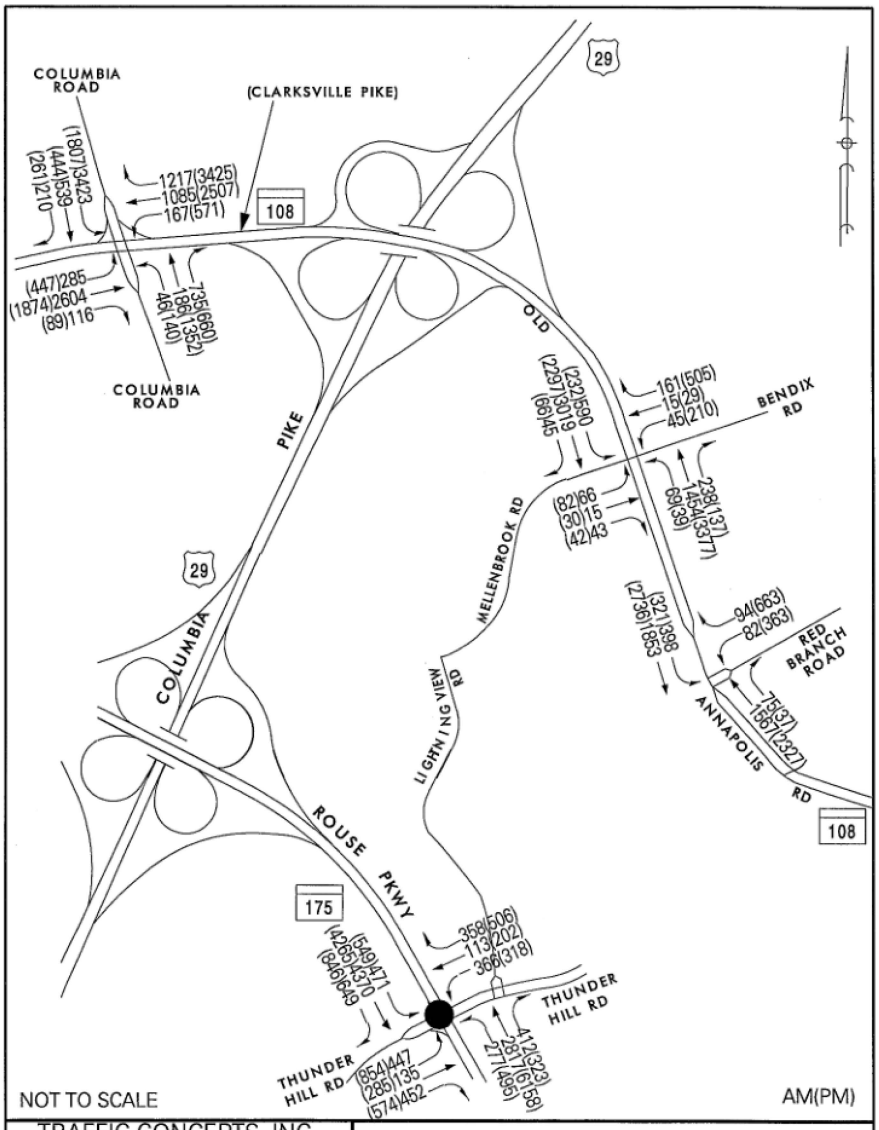
14

FUTURE CONDITION (2037)

As required by the Howard County Chapter 5 study, the key intersections were evaluated with a 20-year planning horizon. The total background traffic as depicted on Exhibit 5 was increased with growth rates to create a year 2037 traffic scenario. The background growth rate as previously described is 3.0 percent over a three-year build-out period (2020). The background traffic for the remaining years was projected at 6.0 percent per year compounded. The 2037 volumes are shown on Exhibit 9. The 2037 intersection analysis results are shown below.

CRITICAL LANE ANALYSIS

	AM CLV(LOS)	PM CLV(LOS)
MD 108 @ Columbia Road	4544(F)	98(F)
MD 108 @ Mellenbrook Road/Bendix Road	1862(F)	2569(F)
MD 108 @ Red Branch Road	2122(F)	3048(F)
MD 175 @ Thunder Hill Road	2994(F)	3457(F)


COLUMBIA ROAD
(CLARKSVILLE PIKE)
29
108
1217(3425)
1085(2507)
167(571)
(1807)3423
(444)539
(261)210
(447)285
(1874)2604
(89)1116
735(660)
186(1352)
461(140)
COLUMBIA ROAD
OLD
PIKE
(229)(232)590
(66)45
(30)19
161(505)
155(29)
45(210)
BENDIX RD
(82)66
(30)15
(42)43
69(39)
238(137)
145(337)
MELLENBROOK RD
29
COLUMBIA
(273)(321)398
(61)63
94(663)
82(363)
RED BRANCH ROAD
LIGHTNING VIEW RD
ANNAPOLIS RD
75(37)
156(232)
108
ROUSE PKWY
175
(426)(549)471
(84)(65)370
(84)649
358(506)
113(202)
366(318)
THUNDER HILL RD
THUNDER HILL RD
(85)447
(28)135
(57)452
412(329)
271(496)
NOT TO SCALE
AM(PM)
TRAFFIC CONCEPTS, INC.
7525 Connelley Drive
Suite B
Hanover, Maryland 21076
410-760-2911
EXHIBIT 9
Total Future Traffic Volumes (2037)

16

SAFETY STUDY

Pedestrian/Bicycle Study

MD 108 (Clarksville Pike) @ Columbia Road – Signalized Intersection

MD 108 (Clarksville Pike) is functionally classified as a Minor Arterial Roadway and Columbia Road is a Major Collector Road. The speed limit along MD 108 is posted at 45 mph and the posted speed limit along Columbia Road is 35 mph.

A pedestrian signal with push-buttons and a crosswalk is provided on the west leg of MD 108 and on both legs of Columbia Road. There are no sidewalks located on this section of MD 108. Along Columbia Road, south of MD 108, sidewalks are provided on both sides of Columbia Road. On the north side of MD 108, Columbia Road has sidewalk along the east side only.

MD 108 (Old Annapolis Rd) @ Mellenbrook Road/Bendix Rd – Signalized Intersection

MD 108 (Clarksville Pike) is functionally classified as a Minor Arterial Roadway. The posted speed limit along this roadway is 40 mph, east of the MD 29 ramps. A sidewalk exists on the east side of MD 108 and continues along Bendix Road. Also, on the west side of MD 108, short sidewalk section of approximately 85 feet extends from Mellenbrook Road and terminates at a sheltered bus stop. A pedestrian signal with push buttons and a crosswalk is located along MD 108 on the south intersection leg.

Mellenbrook Road is a Minor Collector Road and the posted speed limit is 25 mph. A sidewalk exists only along the north side of Mellenbrook Road. A pedestrian signal with push-buttons and a crosswalk is provided along the Mellenbrook Road intersection approach.

Bendix Road is a local roadway that is post at 30 mph. A sidewalk is located along the south side of the road and terminates approximately 100 feet from the site.

MD 108 (Old Annapolis Road) @ Red Branch Road – Signalized Intersection

MD 108 has a sidewalk along the east side of the road and continues along the north side of Red Branch Road. Red Branch Road is functionally classified as a Major Collector Road and has a posted speed limit of 30 mph. As stated, Red Branch Road has sidewalks along the north side of the road. There are no pedestrian signals or crosswalks.

MD 175 (Rouse Parkway) @ Thunder Hill Road – Signalized Intersection

MD 175 (Rouse Parkway) is functionally classified as an Intermediate Arterial Roadway, with a posted speed limit of 50 mph. Thunder Hill Road is classified as a Minor Collector Roadway, with a posted speed limit of 25 mph. Thunder Hill Road has sidewalks along all approaches, with the exception of the segment between MD 175 and Lightning View Road (along the west side of the road). A pedestrian signal with push-buttons and a crosswalk is provided along the east leg of MD 175. There is also a pedestrian crosswalk along the south leg of Thunder Hill Road.

Collision Data

Collision data can only be obtained from the County. This information was requested by the County, but was not sent.

CONCLUSIONS AND RECOMMENDATIONS

The County Adequate Road Facilities Test Evaluation Requirements state that the intersection level of service (LOS) standard for County-controlled intersections is LOS "D" and the standard for State-controlled intersections is LOS "E".

The results of this study show that all of the study intersections will continue to operate at acceptable levels of service at the future 2020 traffic conditions, with the following exception.

MD 108 (Clarksville Pike) @ Columbia Road

The MD 108 @ Columbia Road intersection is projected to operate at an unacceptable "F" level of service (Critical Volume 1633) during the background AM peak time period. The County project will add 55 critical AM peak hour trips to the intersection to create a LOS "F" condition with a Critical Volume of 1688.

In order to mitigate the site generated traffic, we offer the following improvement. The eastbound MD 108 approach has one left turn lane, two through travel lanes, and one exclusive right turn lane. Based on the minimal EB MD 108 right turn movements (43 AM/33 PM) and the substantial EB through volume, we recommend converting the EB MD 108 right turn lane to a shared thru/right turn lane. A receiving lane for this movement currently exists and drops as the southbound onramp to MD 29 south. The distance from the stop bar on MD 108 at Columbia Road to the dedicated right turn lane on the ramp is approximately 575 feet.

This improvement would not impact the PM CLV, but would mitigate 128 AM trips and result in an acceptable "E" level of service during both time periods at future 2020 traffic conditions. A copy of the CLV analysis with this improvement is included on the following page. Based on the results of this study, we recommend improving the MD 108 @ Columbia Road intersection by converting the EB MD 108 right turn lane to a shared thru/right turn lane.

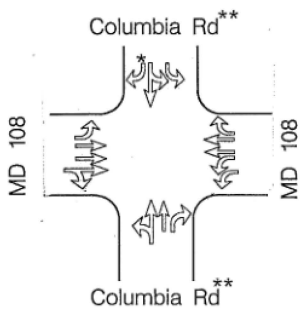
TRAFFIC CONCEPTS, Inc.

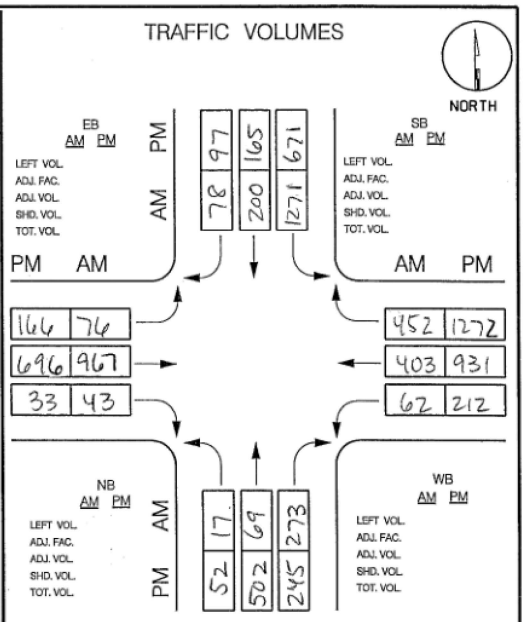
TRAFFIC VOLUMES

LANE CONFIGURATION

* FREE RIGHT
** SPLIT PHASED

NORTH





		TOTAL VOLUME * LUF + OPPOSING LEFTS * LUF =	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	273 × 1.0 − (62 × 0.6)	236*	
	SB	(1271 + 200) × 0.6	883*	
	EB	(967+43) × 0.4 + 62 × 0.6	441*	E
	WB	403 × 0.55 + 76 × 1.0	298	1560
PM	NB	(52 + 502) × 0.55	305*	
	SB	(165+671) × 0.6	502*	
	EB	(696+33) × 0.4 + 212 × 0.6	419	E
	WB	931 × 0.55 + 166 × 1.0	678*	1485

CRITICAL LANE ANALYSIS

Prepared By: J. CAREY Condition: FUTURE (2020) - IMPROVED

20

APPENDIX I

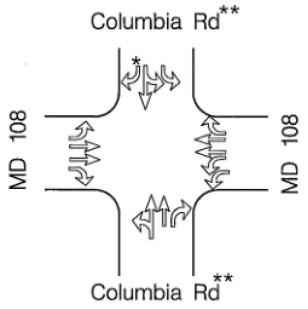
CRITICAL LANE VOLUME ANALYSES

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION

* FREE RIGHT
** SPLIT PHASED

NORTH



TRAFFIC VOLUMES

NORTH

	EB AM	EB PM	SB AM	SB PM	NB AM	NB PM	WB AM	WB PM
LEFT VOL.	89	151	411	1135	16	63	241	
ADJ. FAC.								
ADJ. VOL.								
SHD. VOL.	71	183	366	823	48	459	223	
TOT. VOL.	152	628	57	194	30	39	70	

		TOTAL VOLUME * LUF + OPPOSING LEFTS * LUF =	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	241 × 1.0 − [(57 × 0.6)]	207 *	
	SB	(183 + 1126) × 0.55	785 *	
	EB	847 × 0.55 + 57 × 0.6	500 *	E
	WB	366 × 0.55 + 70 × 1.0	271	1492
PM	NB	(48 + 459) × 0.55	279 *	
	SB	(151 + 605) × 0.6	454 *	
	EB	628 × 0.55 + 194 × 0.6	462	D
	WB	823 × 0.55 + 152 × 1.0	605 *	1338

CRITICAL LANE ANALYSIS

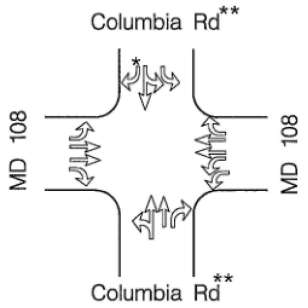
Prepared By: J. CAREY Condition: EXISTING

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION

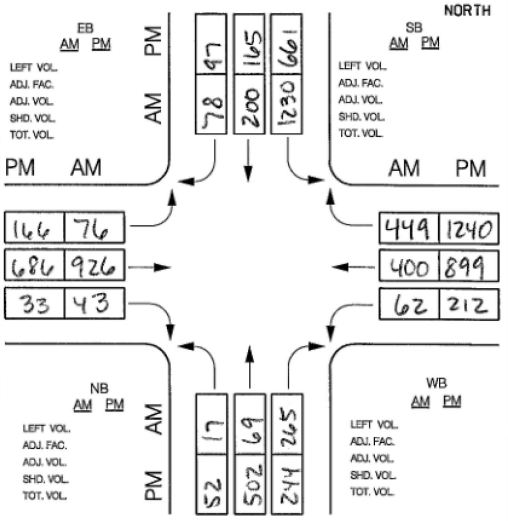
* FREE RIGHT
** SPLIT PHASED

NORTH



TRAFFIC VOLUMES

NORTH



		TOTAL VOLUME * LUF + OPPOSING LEFTS * LUF =	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	205 x 1.0 - (62 x 0.6)	228 *	
	SB	(200 + 1230) x 0.6	858 *	
	EB	926 x 0.55 + 62 x 0.6	547 *	F
	WB	400 x 0.55 + 76 x 1.0	296	1633
PM	NB	(52 + 502) x 0.55	305 *	
	SB	(165 + 661) x 0.6	496 *	
	EB	686 x 0.55 + 212 x 0.6	505	E
	WB	899 x 0.55 + 166 x 1.0	660 *	1461

CRITICAL LANE ANALYSIS

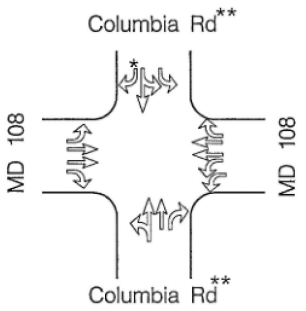
Prepared By: J. CAREY Condition: BACKGROUND

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION

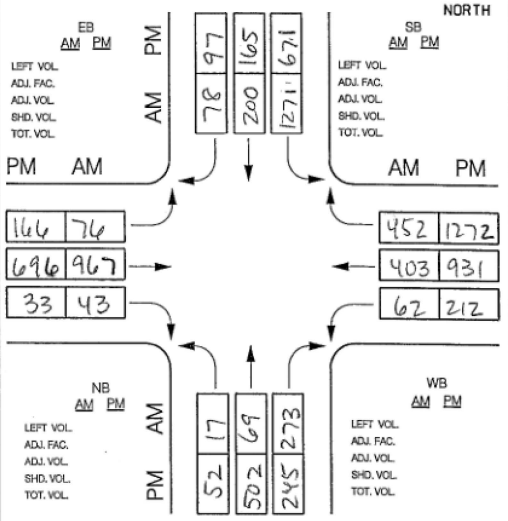
* FREE RIGHT
** SPLIT PHASED

NORTH



TRAFFIC VOLUMES

NORTH



		TOTAL VOLUME * LUF + OPPOSING LEFTS * LUF =	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	273 × 1.0 − (62 × 0.6)	236*	
	SB	(1271 + 200) × 0.6	883*	
	EB	967 × 0.55 + 62 × 0.6	569*	F
	WB	403 × 0.55 + 76 × 1.0	298	1688
PM	NB	(52 + 502) × 0.55	305*	
	SB	(165 + 671) × 0.6	502*	
	EB	696 × 0.55 + 212 × 0.6	510	E
	WB	931 × 0.55 + 166 × 1.0	678*	1485

CRITICAL LANE ANALYSIS

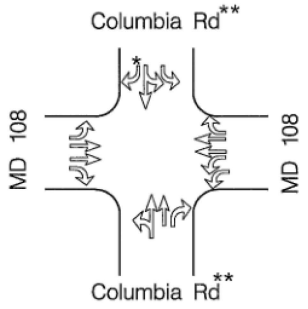
Prepared By: J. CAREY Condition: FUTURE (2020)

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION

* FREE RIGHT
** SPLIT PHASED

NORTH



TRAFFIC VOLUMES

NORTH

	EB AM	EB PM	SB AM	SB PM	NB AM	NB PM	WB AM	WB PM
LEFT VOL.	210	261	1217	3425	140	46	167	571
ADJ. FAC.								
ADJ. VOL.								
SHD. VOL.	539	444	1085	2507	1352	186	1085	2507
TOT. VOL.	3423	1804	447	285	660	735	447	285
	PM	AM	AM	PM	PM	AM	AM	PM

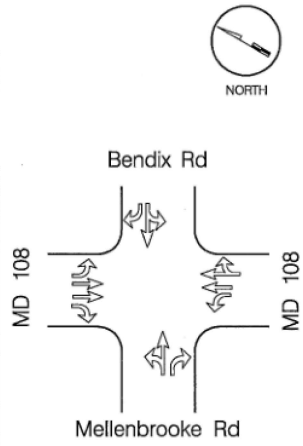
		TOTAL VOLUME * LUF + OPPOSING LEFTS * LUF =	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	735 * 1.0 - (167 * 0.6)	635	F 4544
	SB	(539 + 3423) * 0.6	2377	
	EB	2604 * 0.55 + 167 * 0.6	1532	
	WB	1085 * 0.55 + 285 * 1.0	882	
PM	NB	(140 + 1352) * 0.55	821	F 3998
	SB	(444 + 1804) * 0.6	1351	
	EB	1874 * 0.55 + 571 * 0.6	1373	
	WB	2507 * 0.55 + 447 * 1.0	1826	

CRITICAL LANE ANALYSIS

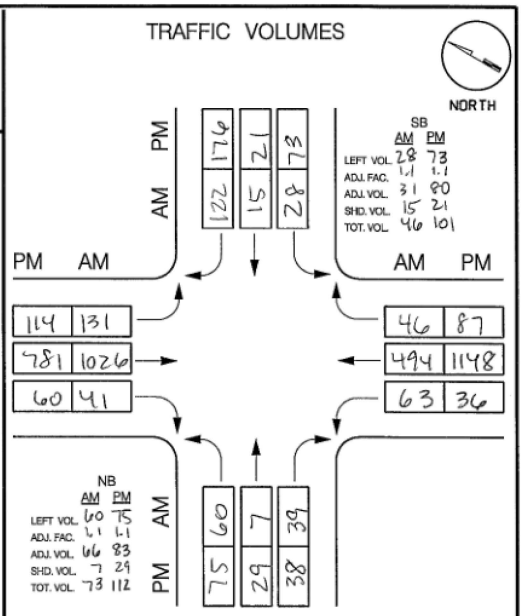
Prepared By: J. CAREY Condition: FUTURE (2037)

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION



TRAFFIC VOLUMES



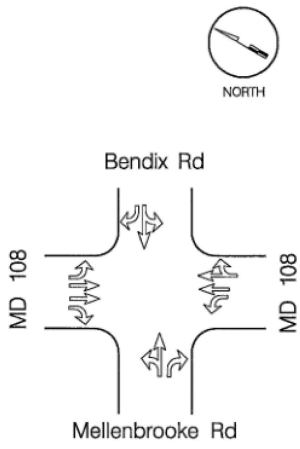
		TOTAL VOLUME * LUF + OPPOSING LEFTS * LUF =	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	73 x 1.0 + 28 x 1.0	101	
	SB	46 x 1.0 + 60 x 1.0	106*	
	EB	1026 x 0.55 + 63 x 1.0	627*	A
	WB	(494 + 46) x 0.55 + 131 x 1.0	428	733
PM	NB	112 x 1.0 + 73 x 1.0	185*	
	SB	101 x 1.0 + 75 x 1.0	176	
	EB	781 x 0.55 + 36 x 1.0	466	A
	WB	(1148 + 87) x 0.55 + 114 x 1.0	793*	978

CRITICAL LANE ANALYSIS

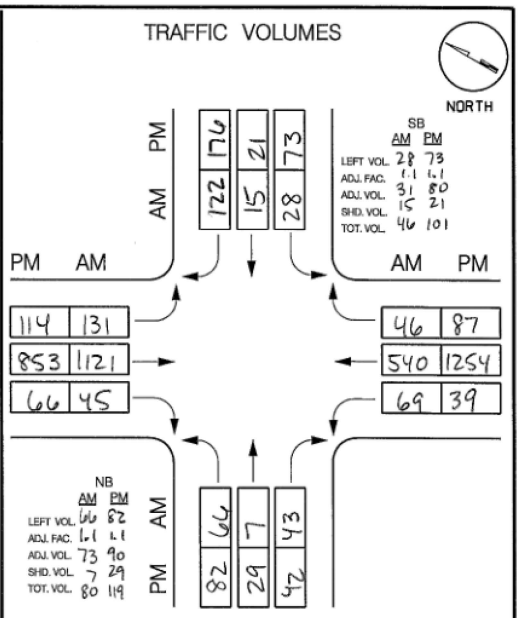
Prepared By: J. CAREY Condition: EXISTING

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION



TRAFFIC VOLUMES



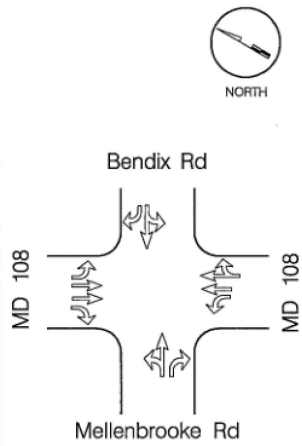
		TOTAL VOLUME * LUF + OPPOSING LEFTS * LUF =	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	80 × 1.0 + 28 × 1.0	108	A 798
	SB	46 × 1.0 + 66 × 1.0	112 *	
	EB	1121 × 0.55 + 69 × 1.0	686 *	
	WB	(540 + 46) × 0.55 + 131 × 1.0	453	
PM	NB	119 × 1.0 + 73 × 1.0	192 *	B 1044
	SB	101 × 1.0 + 82 × 1.0	183	
	EB	853 × 0.55 + 39 × 1.0	508	
	WB	(1254 + 87) × 0.55 + 114 × 1.0	852 *	

CRITICAL LANE ANALYSIS

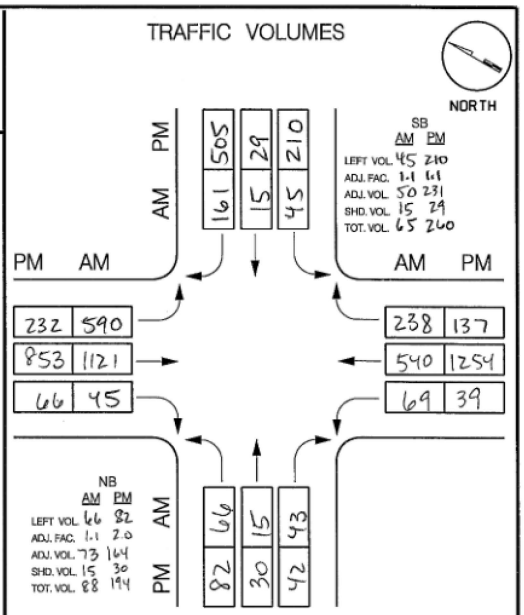
Prepared By: J. CAREY Condition: BACKGROUND

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION



TRAFFIC VOLUMES



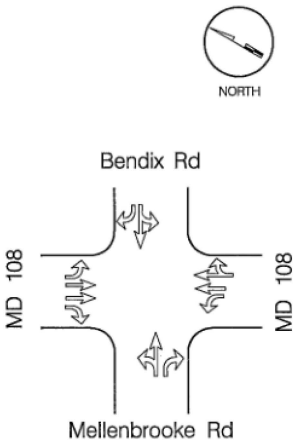
		TOTAL VOLUME * LUF + OPPOSING LEFTS * LUF =	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	88 × 1.0 + 45 × 1.0	133	
	SB	6 × 1.0 + 66 × 1.0	131	
	EB	1121 × 0.55 + 69 × 1.0	686	C
	WB	(540 + 238) × 0.55 + 590 × 1.0	1018*	1151
PM	NB	194 × 1.0 + 210 × 1.0	404	
	SB	(505 − 232) × 1.0 + 82 × 1.0	355	
	EB	853 × 0.55 + 39 × 1.0	508	D
	WB	(1254 + 137) × 0.55 + 232 × 1.0	997*	1401

CRITICAL LANE ANALYSIS

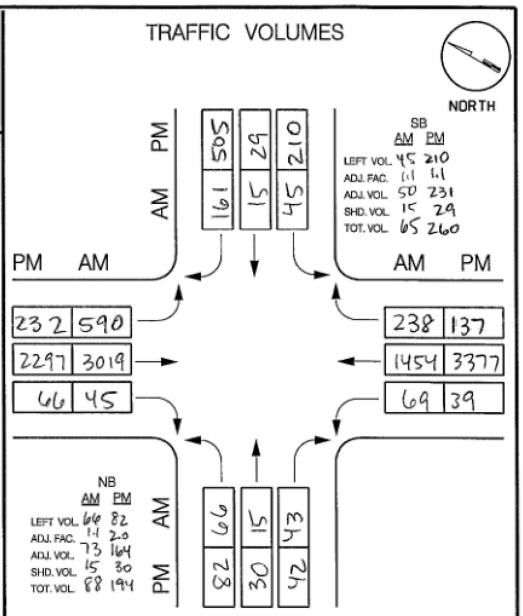
Prepared By: J. CAREY Condition: FUTURE (2020)

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION



TRAFFIC VOLUMES



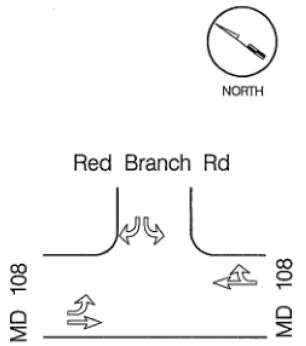
		TOTAL VOLUME * LUF + OPPOSING LEFTS * LUF =	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	88 × 1.0 + 45 × 1.0	133 *	
	SB	65 × 1.0 + 66 × 1.0	131	
	EB	3019 × 0.55 + 69 × 1.0	1729 *	F
	WB	(1454 + 238) × 0.55 + 590 × 1.0	1521	1862
PM	NB	194 × 1.0 + 210 × 1.0	404 *	
	SB	(505 - 232) × 1.0 + 82 × 1.0	355	
	EB	2297 × 0.55 + 39 × 1.0	1302	F
	WB	(3377 + 137) × 0.55 + 232 × 1.0	2165 *	2569

CRITICAL LANE ANALYSIS

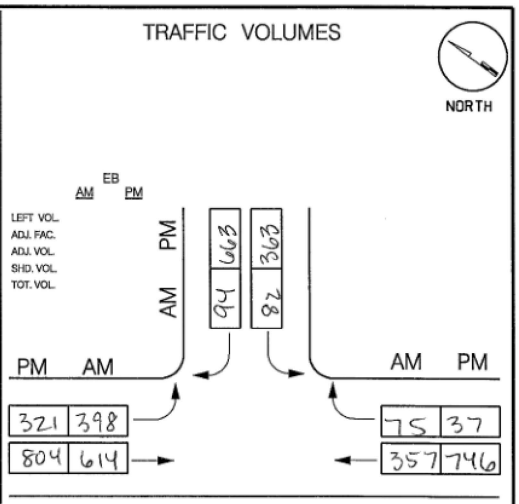
Prepared By: J. CAREY Condition: FUTURE (2037)

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION



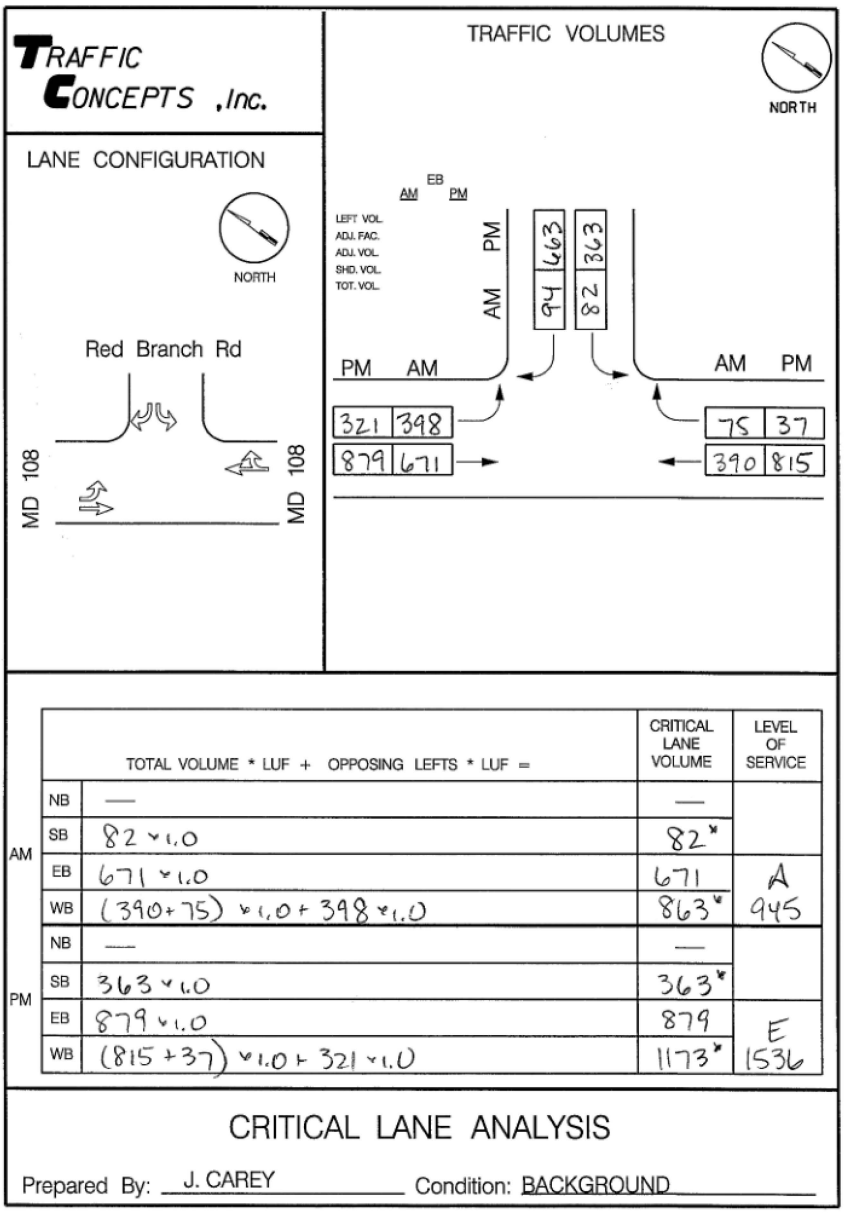
TRAFFIC VOLUMES



		TOTAL VOLUME * LUF + OPPOSING LEFTS * LUF =	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	—	—	
	SB	82 × 1.0	82*	
	EB	614 × 1.0	614	A
	WB	(357 + 75) × 1.0 + 398 × 1.0	830*	912
PM	NB	—	—	
	SB	363 × 1.0	363*	
	EB	804 × 1.0	804	E
	WB	(746 + 37) × 1.0 + 321 × 1.0	1104*	1467

CRITICAL LANE ANALYSIS

Prepared By: J. CAREY Condition: EXISTING



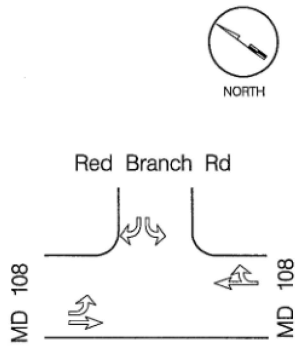
		TOTAL VOLUME * LUF + OPPOSING LEFTS * LUF =	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	—	—	
	SB	82 × 1.0	82*	
	EB	671 × 1.0	671	A
	WB	(390 + 75) × 1.0 + 398 × 1.0	863*	945
PM	NB	—	—	
	SB	363 × 1.0	363*	
	EB	879 × 1.0	879	E
	WB	(815 + 37) × 1.0 + 321 × 1.0	1173*	1536

CRITICAL LANE ANALYSIS

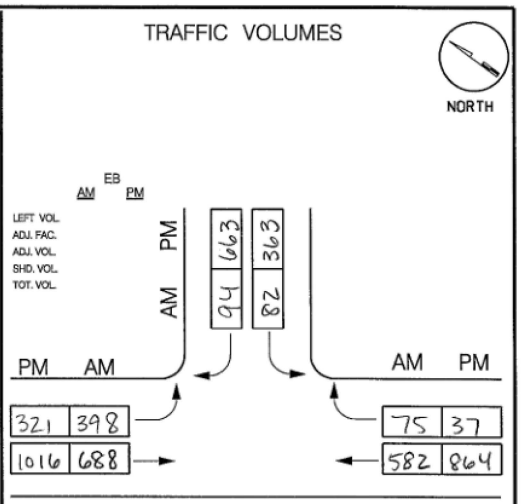
Prepared By: J. CAREY Condition: BACKGROUND

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION



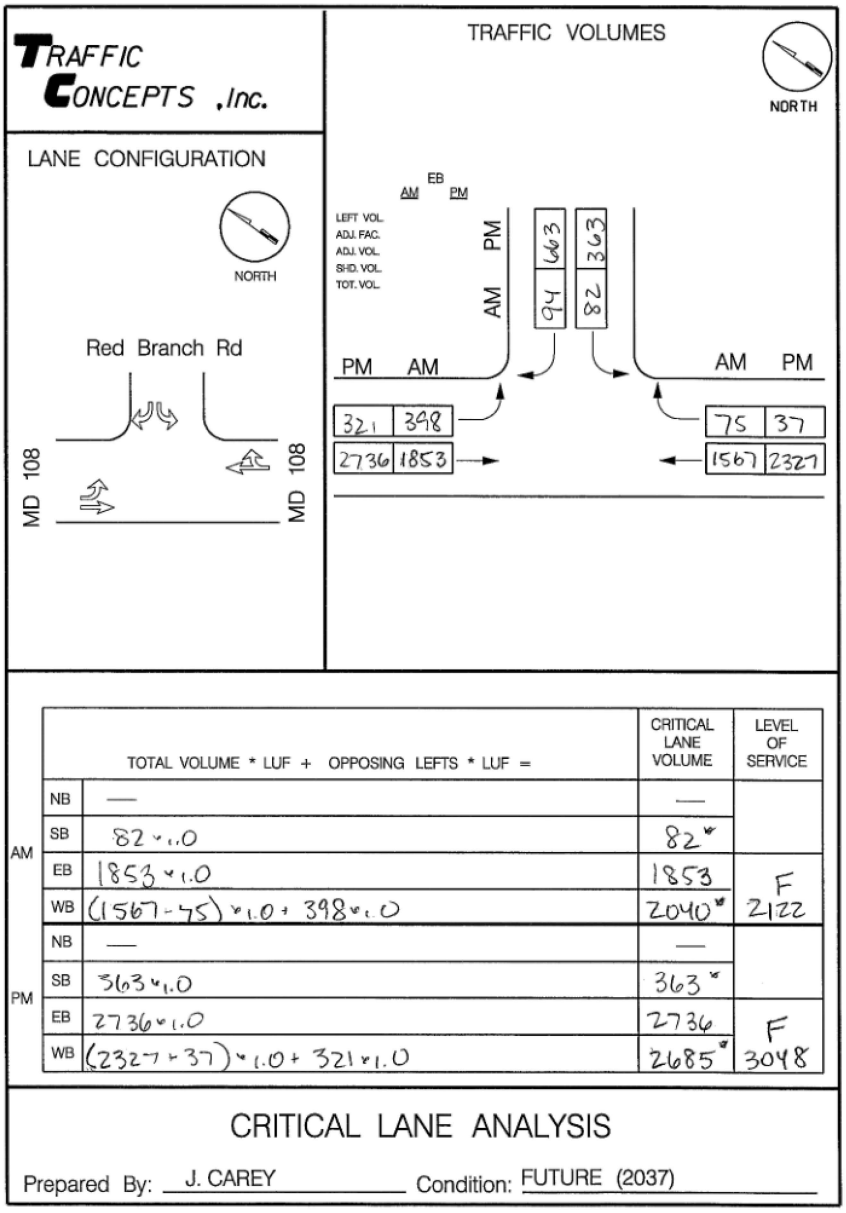
TRAFFIC VOLUMES



		TOTAL VOLUME * LUF + OPPOSING LEFTS * LUF =	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	—	—	B
	SB	82 × 1.0	82*	
	EB	688 × 1.0	688	1137
	WB	(582 + 75) × 1.0 + 398 × 1.0	1055*	
PM	NB	—	—	E
	SB	363 × 1.0	363*	1585
	EB	1016 × 1.0	1016	
	WB	(864 + 37) × 1.0 + 321 × 1.0	1222*	

CRITICAL LANE ANALYSIS

Prepared By: J. CAREY Condition: FUTURE (2020)



		TOTAL VOLUME * LUF + OPPOSING LEFTS * LUF =	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	—	—	
	SB	82 × 1.0	82*	
	EB	1853 × 1.0	1853	F
	WB	(1567 - 75) × 1.0 + 398 × 1.0	2040*	2122
PM	NB	—	—	
	SB	363 × 1.0	363*	
	EB	2736 × 1.0	2736	F
	WB	(2327 - 37) × 1.0 + 321 × 1.0	2685*	3048

CRITICAL LANE ANALYSIS

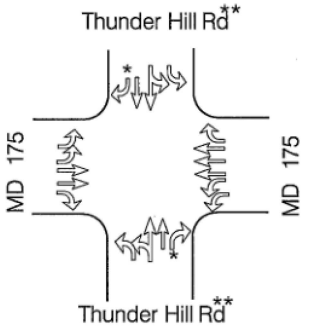
Prepared By: J. CAREY Condition: FUTURE (2037)

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION

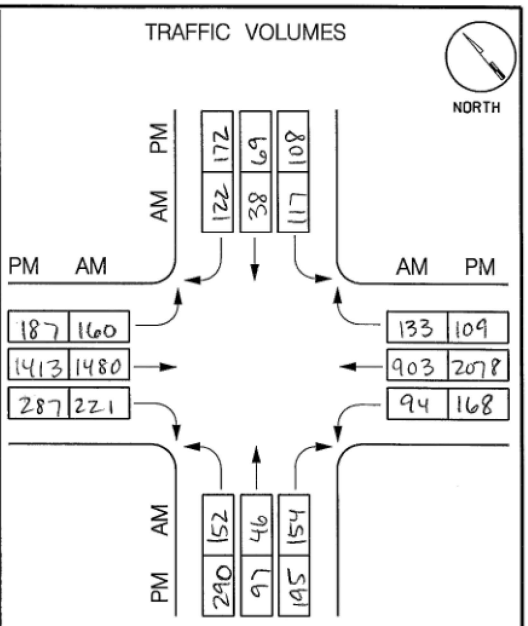
* FREE RIGHT
** SPLIT PHASED

NORTH



TRAFFIC VOLUMES

NORTH



		TOTAL VOLUME * LUF + OPPOSING LEFTS * LUF =	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	(152+46) × 0.4	79 *	
	SB	(38+117) × 0.4	62 *	
	EB	1480 × 0.55 + 94 × 0.6	870 *	B
	WB	903 × 0.4 + 160 × 0.6	457	1011
PM	NB	(290+97) × 0.4	155 *	
	SB	(69+108) × 0.4	71 *	
	EB	1413 × 0.55 + 168 × 0.6	878	C
	WB	2078 × 0.4 + 187 × 0.6	943 *	1169

CRITICAL LANE ANALYSIS

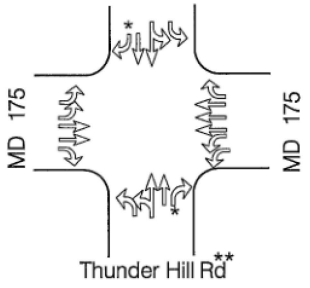
Prepared By: C. ATKINSON Condition: EXISTING

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION

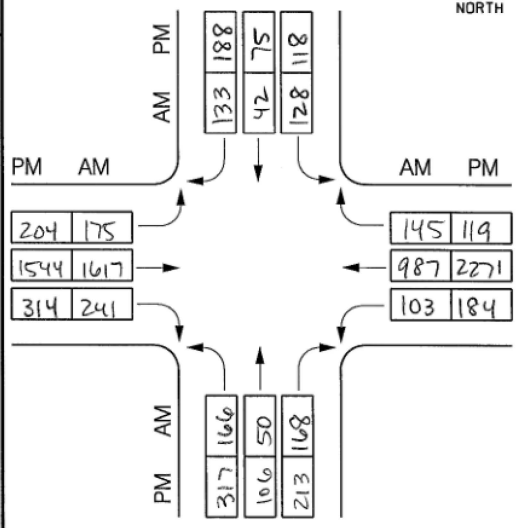
* FREE RIGHT
** SPLIT PHASED

NORTH



TRAFFIC VOLUMES

NORTH



		TOTAL VOLUME * LUF + OPPOSING LEFTS * LUF =	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	(166+50) × 0.4	86	
	SB	(42+128) × 0.4	68	
	EB	1617 × 0.55 + 103 × 0.6	951	B
	WB	987 × 0.4 + 175 × 0.6	500	1105
PM	NB	(317+106) × 0.4	169	
	SB	(75+118) × 0.4	77	
	EB	1544 × 0.55 + 184 × 0.6	960	C
	WB	2271 × 0.4 + 204 × 0.6	1031	1277

CRITICAL LANE ANALYSIS

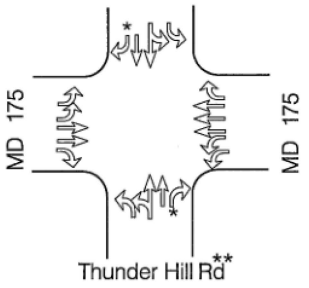
Prepared By: C. ATKINSON Condition: BACKGROUND

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION

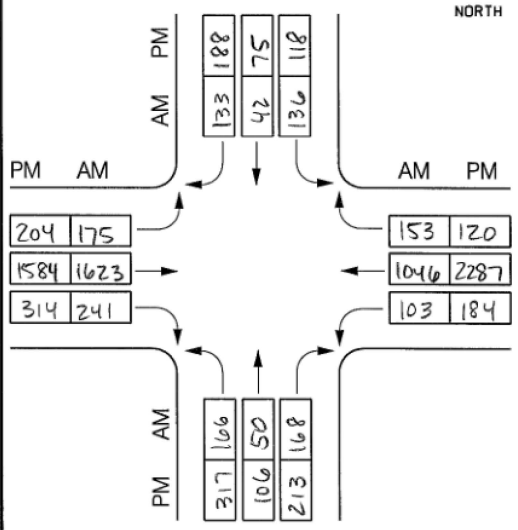
* FREE RIGHT
** SPLIT PHASED

NORTH



TRAFFIC VOLUMES

NORTH



		TOTAL VOLUME * LUF + OPPOSING LEFTS * LUF =	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	(166+50) * 0.4	86 *	
	SB	(42+136) * 0.4	71 *	
	EB	1623 * 0.55 + 103 * 0.6	954 *	B
	WB	1046 * 0.4 + 175 * 0.6	523	1111
PM	NB	(317+106) * 0.4	169 *	
	SB	(75+118) * 0.4	77 *	
	EB	1584 * 0.55 + 184 * 0.6	982	C
	WB	2287 * 0.4 + 204 * 0.6	1037 *	1283

CRITICAL LANE ANALYSIS

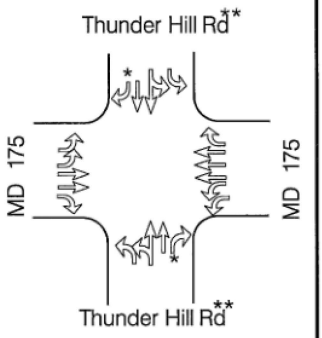
Prepared By: C. ATKINSON Condition: FUTURE 2020

TRAFFIC CONCEPTS, Inc.

LANE CONFIGURATION

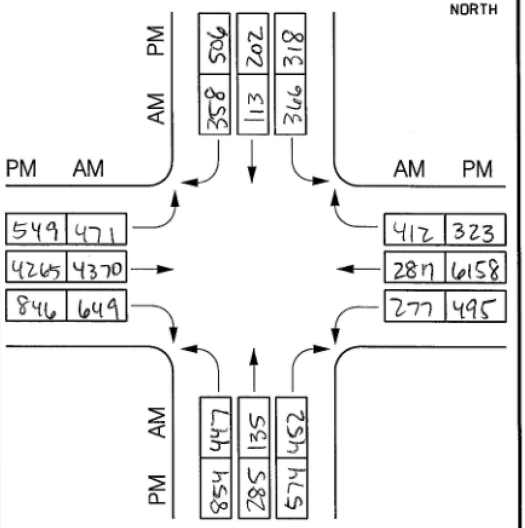
* FREE RIGHT
** SPLIT PHASED

NORTH



TRAFFIC VOLUMES

NORTH



		TOTAL VOLUME * LUF + OPPOSING LEFTS * LUF =	CRITICAL LANE VOLUME	LEVEL OF SERVICE
AM	NB	(447+135) x 0.4	233	
	SB	(113+366) x 0.4	192	
	EB	4370 x 0.55 + 277 x 0.6	2570	F
	WB	2817 x 0.4 + 471 x 0.6	1409	2994
PM	NB	(854+285) x 0.4	456	
	SB	(202+318) x 0.4	208	
	EB	4265 x 0.55 + 495 x 0.6	2643	F
	WB	6158 x 0.4 + 549 x 0.6	2793	3457

CRITICAL LANE ANALYSIS

Prepared By: C. ATKINSON Condition: FUTURE 2037

APPENDIX II

TRAFFIC COUNT DATA

PEAK HOUR TURNING MOVEMENT COUNT

INTERSECTION: MD 108 (CLARKSVILLE PIKE) @ COLUMBIA ROAD **COUNTY:** HOWARD

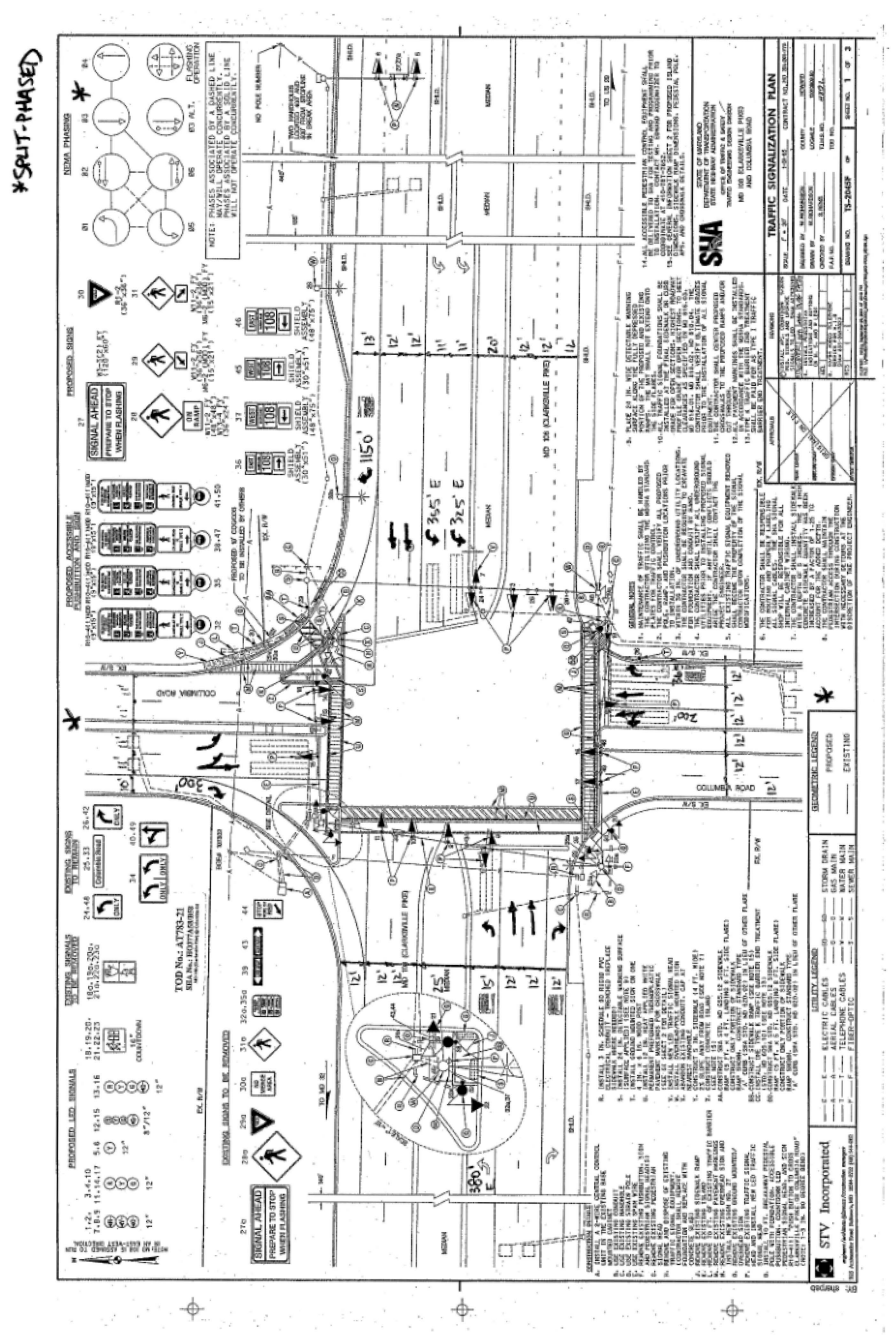
COUNT BY: B. PAGE; A. NEUSE **DATE:** SEPTEMBER 13, 2017

WEATHER: RAIN AM/OVERCAST PM **DAY:** WEDNESDAY

	COLUMBIA RD NORTHBOUND			COLUMBIA RD SOUTHBOUND			MD 108 EASTBOUND				MD 108 WESTBOUND				
TIME	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	UTRN	LEFT	THRU	RIGHT	UTRN	TOTAL
AM															
7:00-7:15	8	9	46	232	44	13	9	156	5	0	13	139	85	1	760
7:15-7:30	3	20	65	239	21	16	15	193	8	0	13	121	86	0	800
7:30-7:45	10	16	69	242	37	18	11	180	4	0	9	124	76	0	796
7:45-8:00	7	12	66	260	32	21	12	222	10	0	9	123	93	0	867
8:00-8:15	4	14	66	247	39	32	13	238	8	0	23	98	71	0	853
8:15-8:30	3	17	69	286	37	17	16	209	12	0	10	108	97	0	881
8:30-8:45	6	17	59	288	50	15	18	196	7	0	14	83	83	0	836
8:45-9:00	2	15	63	273	51	18	21	219	8	1	16	85	107	1	880
9:00-9:15	5	14	50	279	45	21	14	223	12	0	15	90	124	1	893
9:15-9:30	4	18	46	248	54	15	22	226	10	0	22	73	114	1	853
PEAK HR 8:15-9:15 TOTALS	**16**	**63**	**241**	**1126**	**183**	**71**	**69**	**847**	**39**	**1**	**55**	**366**	**411**	**2**	**PHF 0.98**
PM															
4:00-4:15	7	46	32	160	26	27	19	146	5	0	30	154	212	2	866
4:15-4:30	7	63	51	141	30	25	31	174	12	1	47	126	253	0	961
4:30-4:45	8	58	37	123	25	17	38	142	3	0	48	197	276	2	974
4:45-5:00	6	95	43	135	41	26	29	165	5	1	46	167	296	1	1056
5:00-5:15	10	127	58	166	40	17	26	141	8	0	44	163	280	1	1081
5:15-5:30	7	92	53	148	32	30	39	175	2	0	43	239	281	0	1141
5:30-5:45	19	125	60	148	43	20	41	144	11	1	65	209	276	4	1166
5:45-6:00	12	115	52	143	36	22	42	168	9	3	35	212	298	2	1149
PEAK HR 5:00-6:00 TOTALS	**48**	**459**	**223**	**605**	**151**	**89**	**148**	**628**	**30**	**4**	**187**	**823**	**1135**	**7**	**PHF 0.97**

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*SPLIT-PHASED
TRAFFIC SIGNALIZATION PLAN
STV Incorporated
SHA
COLUMBIA ROAD
MD 108 (CLARKSVILLE PIKE)

PEAK HOUR TURNING MOVEMENT COUNT

INTERSECTION: MD 108 (OLD ANNAPOLIS RD) @ MELLENBROOK RD / BENDIX RD

COUNTY: HOWARD

COUNT BY: B. PAGE; A. NEUSE

DATE: SEPTEMBER 14, 2017

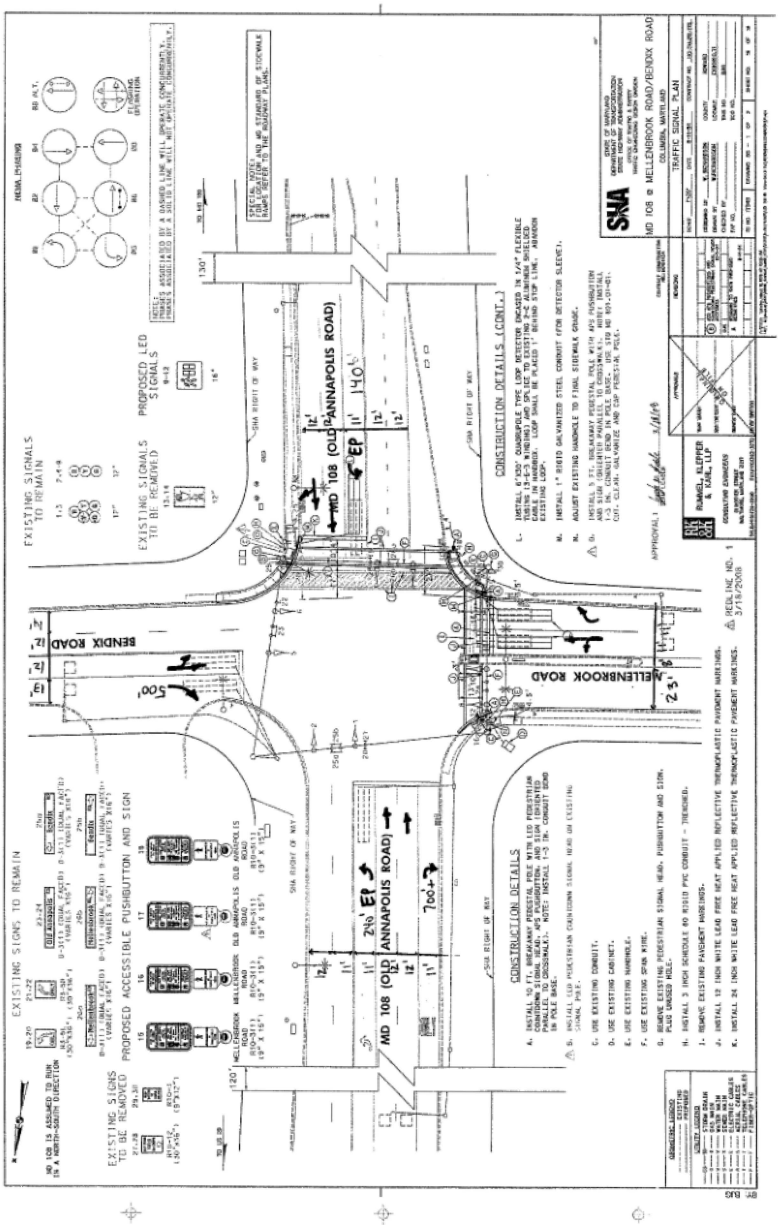
WEATHER: OVERCAST

DAY: THURSDAY

	MELLENBROOKE RD NORTHBOUND			BENDIX RD SOUTHBOUND			MD 108 EASTBOUND			MD 108 WESTBOUND			
TIME	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
AM													
7:00-7:15	9	0	9	2	3	16	24	129	3	3	99	12	309
7:15-7:30	4	0	6	5	6	22	39	172	7	2	121	13	397
7:30-7:45	5	2	10	8	0	12	28	179	8	9	110	12	383
7:45-8:00	5	0	14	10	2	24	33	224	17	4	95	17	445
8:00-8:15	12	3	10	8	1	24	29	260	14	13	113	14	501
8:15-8:30	6	2	6	16	3	24	24	203	21	13	105	11	434
8:30-8:45	11	0	3	7	5	32	35	261	13	9	115	10	501
8:45-9:00	14	1	4	7	5	26	48	274	7	7	123	11	527
9:00-9:15	17	4	12	6	3	39	29	290	14	33	134	12	593
9:15-9:30	18	2	20	8	2	25	19	201	7	14	122	13	451
PEAK HR 8:30-9:30 TOTALS	**60**	**7**	**39**	**28**	**15**	**122**	**131**	**1026**	**41**	**63**	**494**	**46**	**PHF 0.87**
PM													
4:00-4:15	21	9	41	11	1	57	23	189	11	4	204	14	585
4:15-4:30	22	13	15	16	1	51	21	196	13	8	225	17	598
4:30-4:45	14	4	14	19	3	59	18	191	15	4	239	12	592
4:45-5:00	27	9	8	17	3	34	34	208	14	5	237	18	614
5:00-5:15	10	10	10	25	6	57	29	191	12	11	299	32	692
5:15-5:30	21	2	10	15	8	36	25	208	18	12	313	19	687
5:30-5:45	17	8	10	16	4	49	26	174	16	8	299	18	645
5:45-6:00	22	6	8	17	8	41	25	217	11	5	231	14	605
PEAK HR 4:45-5:45 TOTALS	**75**	**29**	**38**	**73**	**21**	**176**	**114**	**781**	**60**	**36**	**1148**	**87**	**PHF 0.95**

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EXISTING SIGNS TO REMAIN
EXISTING SIGNALS TO REMAIN
EXISTING SIGNALS TO BE REMOVED
PROPOSED LED SIGNALS
PROPOSED ACCESSIBLE PUSHBUTTON AND SIGN
EXISTING SIGNS TO BE REMOVED
MD 108 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION
MD 108 (OLD ANNAPOLIS ROAD)
MELLENBROOK ROAD
BENDIX ROAD
SHA RIGHT OF WAY
CONSTRUCTION DETAILS
CONSTRUCTION DETAILS (CONT.)
TRAFFIC SIGNAL PLAN
MD 108 @ MELLENBROOK ROAD/BENDIX ROAD
COLUMBIA, MARYLAND
SHA

PEAK HOUR TURNING MOVEMENT COUNT

INTERSECTION: MD 108 (OLD ANNAPOLIS RD) @ RED BRANCH RD (SIGNALIZED INTERSECTION)

COUNTY: HOWARD

COUNT BY: J. BRASHEARS

DATE: SEPTEMBER 14, 2017

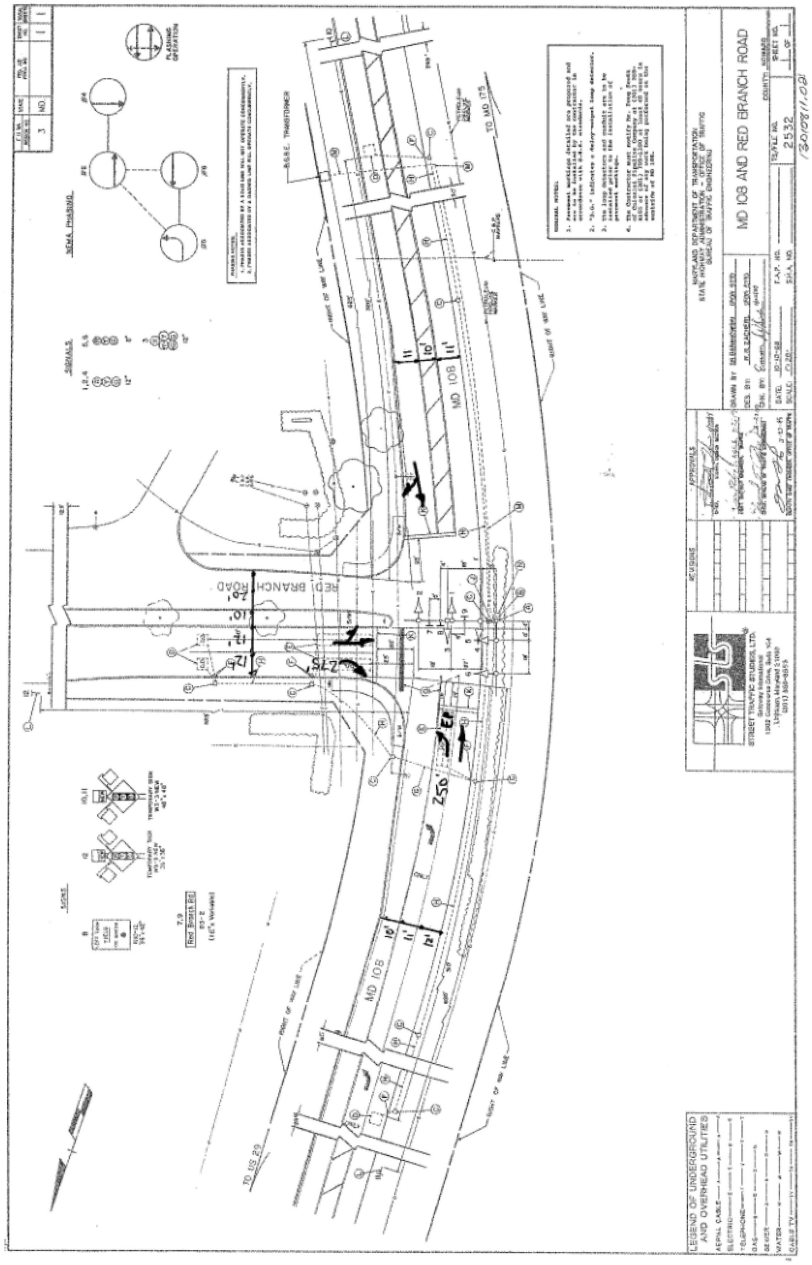
WEATHER: OVERCAST

DAY: THURSDAY

	NORTHBOUND			RED BRANCH RD SOUTHBOUND			MD 108 EASTBOUND			MD 108 WESTBOUND			
TIME	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL
AM													
7:00-7:15				7		28	31	123			96	14	299
7:15-7:30				9		24	47	134			109	7	330
7:30-7:45				9		19	44	138			116	14	340
7:45-8:00				15		12	71	157			85	23	363
8:00-8:15				15		24	81	191			110	31	452
8:15-8:30				19		28	98	129			101	18	393
8:30-8:45				14		23	98	147			96	21	399
8:45-9:00				10		16	72	140			74	17	329
9:00-9:15				36		30	143	153			89	27	478
9:15-9:30				22		25	85	174			98	10	414
PEAK HR 8:30-9:30 TOTALS				**82**		**94**	**398**	**614**			**357**	**75**	**PHF 0.85**
PM													
4:00-4:15				82		94	34	178			124	13	525
4:15-4:30				49		79	66	192			201	8	595
4:30-4:45				53		115	58	201			155	15	597
4:45-5:00				70		106	65	157			129	13	540
5:00-5:15				103		178	65	168			169	5	688
5:15-5:30				98		191	77	227			202	7	802
5:30-5:45				87		181	80	208			194	14	764
5:45-6:00				75		113	99	201			181	11	680
PEAK HR 5:00-6:00 TOTALS				**363**		**663**	**321**	**804**			**746**	**37**	**PHF 0.91**

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MD 108 AND RED BRANCH ROAD
MD 108
RED BRANCH ROAD
TO MD 175
TO US 29
LEGEND OF UNDERGROUND AND OVERHEAD UTILITIES

PEAK HOUR TURNING MOVEMENT COUNT

INTERSECTION: MD 175 (ROUSE PKWY) @ THUNDER HILL RD **COUNTY:** HOWARD

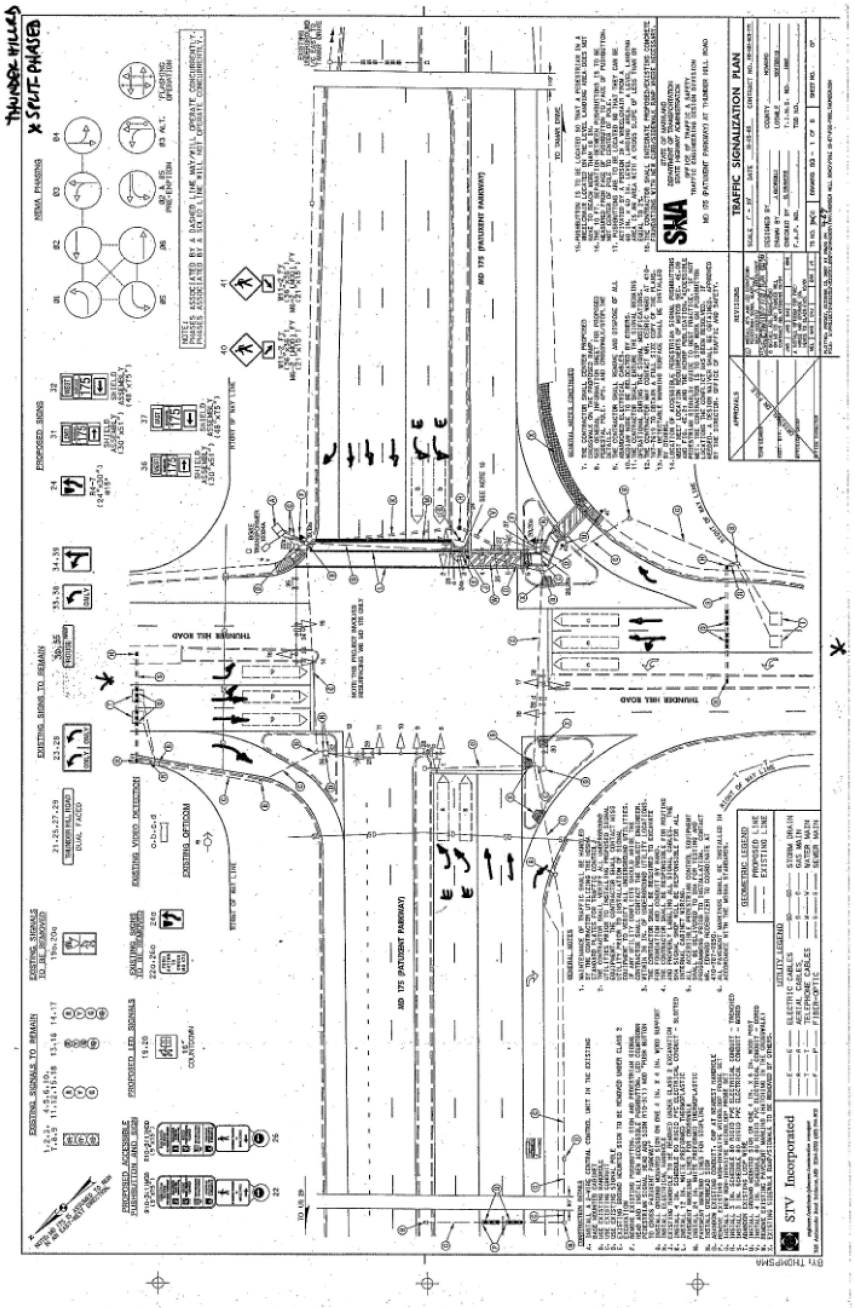
COUNT BY: A. NEUSE; B. PAGE **DATE:** FEBRUARY 6, 2018

WEATHER: CLEAR **DAY:** TUESDAY

	THUNDER HILL RD NORTHBOUND				THUNDER HILL RD SOUTHBOUND				MD 175 (ROUSE PKWY) EASTBOUND				MD 175 (ROUSE PKWY) WESTBOUND				
TIME	LEFT	THRU	RIGHT	UTRN	LEFT	THRU	RIGHT	UTRN	LEFT	THRU	RIGHT	UTRN	LEFT	THRU	RIGHT	UTRN	TOTAL
AM																	
7:00-7:15	32	8	36	0	13	15	18	0	14	251	39	0	14	158	16	0	614
7:15-7:30	45	10	55	0	16	6	16	0	25	345	33	1	15	186	18	0	771
7:30-7:45	32	4	55	0	26	9	20	0	36	400	31	0	16	197	28	0	854
7:45-8:00	50	19	34	0	19	7	19	0	39	409	44	0	27	218	34	0	919
8:00-8:15	43	13	26	0	19	8	17	0	39	384	59	0	22	170	29	0	829
8:15-8:30	33	6	48	0	27	14	31	0	49	385	61	0	25	233	31	0	943
8:30-8:45	42	14	46	0	38	5	39	0	28	347	56	0	22	240	35	0	912
8:45-9:00	34	13	34	0	33	11	35	1	41	364	45	3	25	260	38	0	937
AM PEAK HR 8:00-9:00 TOTALS	**152**	**46**	**154**	**0**	**117**	**38**	**122**	**1**	**157**	**1480**	**221**	**3**	**94**	**903**	**133**	**0**	**PHF 0.96**
PM																	
4:00-4:15	72	24	58	0	39	18	47	0	23	345	59	0	44	426	23	0	1178
4:15-4:30	84	18	42	0	32	18	48	0	48	358	61	3	43	437	24	1	1217
4:30-4:45	68	26	36	0	41	12	67	0	41	329	60	4	36	465	25	0	1210
4:45-5:00	63	18	43	0	21	17	48	0	32	382	58	0	42	508	28	1	1261
5:00-5:15	78	23	53	0	32	19	63	0	46	358	53	6	34	520	22	1	1308
5:15-5:30	70	30	54	0	23	13	41	0	43	384	80	8	35	494	27	1	1303
5:30-5:45	75	22	46	0	29	19	35	0	45	301	72	2	43	551	27	1	1268
5:45-6:00	67	22	42	0	23	18	33	0	33	370	82	4	52	513	33	1	1293
PM PEAK HR 5:00-6:00 TOTALS	**290**	**97**	**195**	**0**	**107**	**69**	**172**	**0**	**167**	**1413**	**287**	**20**	**164**	**2078**	**109**	**4**	**PHF 0.99**

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THUNDER HILL ROAD
MD 175 (PATUXENT PARKWAY)
TRAFFIC SIGNALIZATION PLAN
SHA
STV Incorporated

APPENDIX III

SITE TRIP DATA

Parking Lot Survey

Parking Lot Survey – Existing Condition

The parking lot survey information is used to calculate the existing parking demand and is used to estimate the future parking demand generated by planned court house improvements. The following information and data are considered in the parking survey.

- Observation Hours: **8:00 a.m. to 5 p.m.**
- Parking Data used in Study: **Study Date 1-22-15**
- Independent variable: This is a physical, measurable, and predictable unit that describes the study site. **The independent variable is the existing building area of 80,439 GSF.**
- Existing Parking supply: The total number of parking spaces that are available at the site are determined by field visits. The upper parking lot contains 72 spaces, the lower lot has 190 spaces, and 11 spaces surround the circuit court building. **The total parking supply including handicap and reserved parking spaces is 273.**
- Existing Parking Supply Ratio: A ratio expressed in terms of spaces per 1,000 sq. ft. GFA. **The parking supply ratio is 3.4 spaces per 1,000 sq. ft. GFA.**
- Effective Parking Supply: 85-95 percent (*Shared Parking* Second, Edition (Urban Land), 3.

The parking survey counts were conducted on two separate week days during the course of the business day. This information is included on the following pages.

PARKING LOT OCCUPANCY COUNT

PARKING LOT: Howard Co.Court House Parking Lot **COUNTY:** Howard

COUNT BY: Amelia Neuse **DATE:** 1.22.15

WEATHER: Clear **DAY:** Thurs. (8A-5P)

TIME	# OF PARKED CARS
8:00-8:30	80
8:30-9:00	126
9:00-9:30	189
9:30-10:00	247
10:00-10:30	249
10:30-11:00	N/A
11:00-11:30	204
11:30-12:00	185
12:00-12:30	155
12:30-1:00	117
1:00-1:30	121
1:30-2:00	115
2:00-2:30	120
2:30-3:00	N/A
3:00-3:30	160
3:30-4:00	151
4:00-4:30	140
4:30-5:00	111

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Future Peak Hour Site Generated Trips

Based on the parking lot count conducted for this report, we can estimate the existing site generated peak hour trips. The survey data displayed on page 17 shows the maximum parked vehicles at the Howard County Circuit Court site during typical morning and evening peak hour time periods. The parking lot counts identified the following peak hour trip rates/trips.

Per 1,000 GSF of floor area (80.439 GSF)

7-9 AM Peak Hour Total	2.35	189
3-5 PM Peak Hour Total	1.99	160

Site Generated Trip Estimation – A Comparison of Findings

In order to verify the field counts, we examined the Institute of Transportation Engineers, Trip Generation Manual, 9th Edition (ITE). For an 80,439 GSF Government Office Complex (733), the ITE Manual shows the following peak hour trips:

Per 1,000 GSF of floor area (80.439 GSF)

7-9 AM Peak Hour Total	2.21	178
4-6 PM Peak Hour Total	2.85	229

The ITE data is based on a similar land use for a government office complex and not a courthouse therefore some variation between the total peak hour trips is expected. The major expected difference between the uses is with the evening peak hour trips. Office uses typically have a higher outbound trip rate in the evening compared to a courthouse use.

In order to forecast the future intersection level of service at the key intersections, we have used the higher ITE rates with the previously identified courthouse distribution pattern and the planned increase in the courthouse building size.

Using the ITE data, the morning and evening peak hour trips were distributed through the study intersections for Project A and Project B. The existing traffic data was used to establish the trip distribution pattern. The new ITE trips were then added to the existing morning and evening peak hour traffic volumes to establish the future traffic volumes for each scenario. Exhibits 4 and 5 show the peak hour trips and future traffic for Project A. Exhibits 5 and 6 show trips and resulting future traffic for Project B. The CLV intersection analysis results are shown on the following page.

PEAK HOUR TURNING MOVEMENT COUNT

LOCATION: 9250 BENDIX ROAD - EXISTING TRIPS **COUNTY:** HOWARD

COUNT BY: P. PIRMANN **DATE:** SEPTEMBER 14, 2017

WEATHER: CLEAR **DAY:** THURSDAY

	INS	OUTS	
TIME			TOTAL
AM			
7:00-7:15	15	6	21
7:15-7:30	34	4	38
7:30-7:45	27	15	42
7:45-8:00	36	11	47
8:00-8:15	18	10	28
8:15-8:30	20	10	30
8:30-8:45	19	8	27
8:45-9:00	25	9	34
9:00-9:15	17	21	38
9:15-9:30	16	17	33
AM PEAK HR 7:15-8:15 TOTALS	**115**	**40**	**PHF 0.82**
PM			
4:00-4:15	6	32	38
4:15-4:30	2	18	20
4:30-4:45	2	25	27
4:45-5:00	3	20	23
5:00-5:15	2	5	7
5:15-5:30	2	7	9
5:30-5:45	5	7	12
5:45-6:00	9	3	12
PM PEAK HR 4:00-5:00 TOTALS	**13**	**95**	**PHF 0.71**

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Trip Generation Summary

Alternative: Alternative 1
Phase:
Project: New Project

Open Date: 9/20/2017
Analysis Date: 9/20/2017

ITE	Land Use		Weekday AM Peak Hour of Adjacent Street Traffic				Weekday PM Peak Hour of Adjacent Street Traffic			
		*	Enter	Exit	Total		*	Enter	Exit	Total
714	HQCORPORATE 1		274	21	295			28	254	282
	200 Gross Floor Area 1000 SF									
Unadjusted Volume			274	21	295			28	254	282
Internal Capture Trips			0	0	0			0	0	0
Pass-By Trips			0	0	0			0	0	0
Volume Added to Adjacent Streets			274	21	295			28	254	282

Total Weekday AM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent
Total Weekday PM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent

* - Custom rate used for selected time period.

Source: Institute of Transportation Engineers, Trip Generation Manual 9th Edition, 2012
TRIP GENERATION 2014, TRAFFICWARE, LLC P. 1