



CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI
NW $\frac{1}{4}$, SECTION S17, TOWNSHIP 47N, RANGE 31W

ALL ISSUES PERTAINING TO LIFE, SAFETY, AND PROPERTY PROTECTION FROM THE HAZARDS OF FIRE, EXPLOSION OR DANGEROUS CONDITIONS IN NEW AND EXISTING BUILDINGS, STRUCTURES AND PREMISES, AND TO THE SAFETY TO FIRE FIGHTERS AND EMERGENCY RESPONDERS DURING EMERGENCY OPERATIONS, SHALL BE IN ACCORDANCE WITH THE 2018 INTERNATIONAL FIRE CODE.

1. THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO ALL APPLICABLE STANDARDS AND SPECIFICATIONS OF THE PUBLIC WORKS DEPARTMENT OF THE CITY OF LEE'S SUMMIT, MISSOURI, IN ALL USAGE AND ALL SUPPLEMENTS THERE TO.
2. CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS, BONDS, AND INSURANCE REQUIRED BY THE CITY.
3. THE IMPROVEMENTS SHOWN ON THIS PLAN ARE PRIVATE IMPROVEMENTS. COORDINATE WITH CITY FOR REQUIRED PERMITS, BONDS AND INSURANCE.
4. ALL WORKMANSHIP AND MATERIALS SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE ENGINEERING DEPARTMENT OF THE CITY OF LEE'S SUMMIT, MISSOURI.
5. THE UTILITY LOCATIONS SHOWN ON THESE PLANS ARE TAKEN FROM UTILITY COMPANY RECORDS AND ARE APPROXIMATE ONLY. THEY DO NOT CONSTITUTE ACTUAL FIELD LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.
6. THE DEVELOPER/OWNER SHALL CONTROL EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION, AND SHALL KEEP THE STREETS CLEAN OF MUD AND DEBRIS.
7. ALL EXCESS MATERIAL SHALL BE REMOVED LEGALLY FROM SITE AND DISPOSED OF OFF SITE.
8. TRAFFIC CONTROL AND MAINTENANCE OF TRAFFIC DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PUBLIC WORKS DEPARTMENT AND MUTCD.
9. EROSION CONTROL MEASURES SHALL BE PROVIDED AT ALL LOCATIONS WHERE DRAINAGE IS LEAVING THE PROJECT SITE. THE EROSION CONTROL PLAN SHOWS MINIMUM EROSION CONTROL MEASURES TO BE PROVIDED. ADDITIONAL SITE SPECIFIC MEASURES MAY BE NECESSARY AND SHALL BE PROVIDED BY THE DEVELOPER/OWNER, AT THE CONTRACTOR'S EXPENSE.
10. ANY EXISTING OR NEW STORM SEWER INLETS IN USE DURING DEMOLITION, GRADING OR CONSTRUCTION SHALL HAVE INLET PROTECTION AS SPECIFIED.

SW MARKER ST

S MO RTE 291

SE SCHERER RD

SE DECKER

SE THOMPSON DR

PROJECT LOCATION

LOCATION MAP

1" = 100'

NORTH

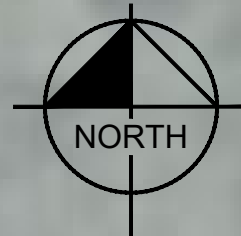
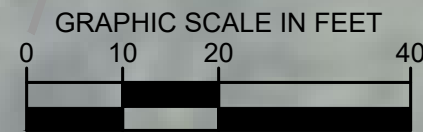
	PROPOSED STANDARD DUTY ASPHALT PAVEMENT
	PROPOSED HEAVY DUTY CONCRETE PAVEMENT
	PROPOSED BUILDING
	EXISTING PUBLIC ROADWAY
	EXISTING 60' STREAM BUFFER
	PROPERTY LINE
	PROPOSED BUILDING OUTLINE
	EASEMENT LINE
	SETBACK LINE
	STANDARD CURB & GUTTER
	EXISTING SANITARY SEWER
	EXISTING WATER LINE
	EXISTING FIBER OPTIC
	EXISTING GAS
	EXISTING POWER
	EXISTING TELECOMMUNICATIONS
	PROPOSED WATER LINE
	PROPOSED UNDERGROUND ELECTRIC
	PROPOSED SANITARY SEWER

Sheet Number	Sheet Title
C001	COVER SHEET
C002	EXISTING CONDITIONS
C003	SITE PLAN
C004	GRADING PLAN
C005	ADA RAMPS
C006	UTILITY & STORMWATER PLAN
C007	STORMWATER PLAN & PROFILE
C008	STORMWATER PLAN & PROFILE
C009A	STORMWATER BMP
C009B	DETAILS
C009C	ADS DETAILS
C010	DETAILS
C011	DETAILS
C012	DETAILS
L001	LANDSCAPE PLAN
L002	LANDSCAPE DETAILS
A101	FLOOR PLANS
A201	ELEVATIONS - BUILDING A
A202	ELEVATIONS - BUILDING B
A203	RENDERINGS
A204	TRASH ENCLOSURE PLAN & DETAILS
M101	MECHANICAL FLOOR PLANS
E001	SITE PHOTOMETRICS
F001	FIRE SUPPRESSION
F101	FIRE SUPPRESSION FLOOR PLANS
F500	FIRE SUPPRESSION DETAILS

C001

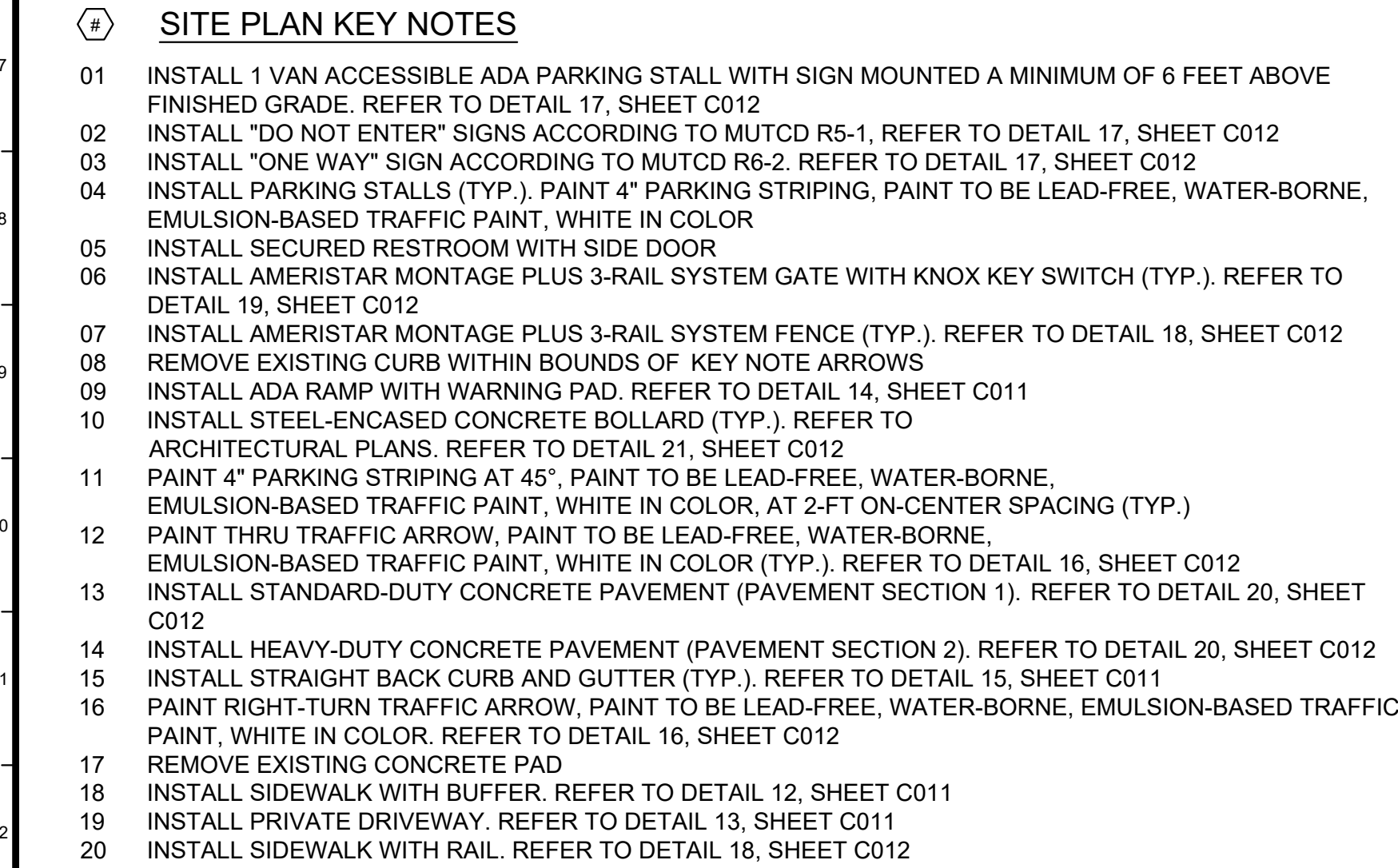


*NOTE: DASHED PARCEL LINES ARE FROM CITY OF LEE'S SUMMIT GIS DATABASE
AND ARE NOT SURVEYED. SOME SPACIAL DISCREPANCY MAY BE PRESENT.



Drawing name: K:\KAC_LUE\208442000_Capital Builders Lee's Summit\2023 Design\CAD\Plan\Sheet\CDP002 - EXISTING CONDITIONS.dwg C002 - EXISTING CONDITIONS Apr 29, 2024 2:08pm by: logan.green
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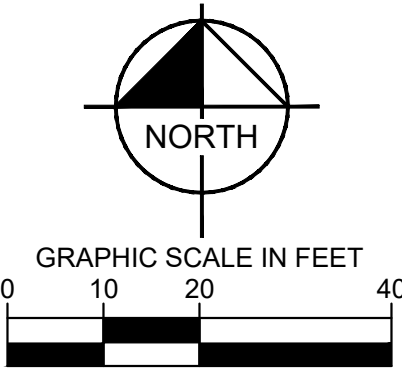
LEE'S SUMMIT FLEX SPACE 60 SE THOMPSON DR LEE'S SUMMIT, MISSOURI 64081		EXISTING CONDITIONS		CAPITAL BUILDERS		Kimley»Horn © 2023 KIMLEY-HORN AND ASSOCIATES, INC. 605 PENNSYLVANIA AVENUE, SUITE 150 KANSAS CITY, MO 64105 WWW.KIMLEY-HORN.COM		BY: _____ DATE: _____ REVISIONS: _____	
ORIGINAL ISSUE: 4/29/2024		KHA PROJECT NO. 268442000		SHEET NUMBER C002		SCALE: AS NOTED DESIGNED BY: LLG DRAWN BY: LLG CHECKED BY: PUJ		STATE OF MISSOURI PATRICK JOYCE NUMBER PE-20994-0012 4/29/2024 PROFESSIONAL ENGINEER	



SUMMARY TABLE			
A	Zoning		
	Existing	Industrial	
	Proposed	Industrial	
B	Approximate Total Land Area*		
	Existing	2.13	Acres
C	Right-of-way		
	Existing	0.00	Acres
	Proposed	0.00	Acres
D	Approximate Net Land Area*		
	Existing	2.13	Acres
	Proposed	2.13	Acres
E	Impervious Area		
	Existing	0.03 Acres	1.4% Area
	Proposed	1.19 Acres	55.9% Area
F	Proposed Uses		
	Flex Storage		
G	Building Information		
	Gross Floor Area (SF)	+/- 24,000	
	Floor Area Ratio	0.27	
H	Off-Street Vehicle Parking		
	Stalls Required	25	
	Stalls Provided	50	
	ADA Stalls Required	1	
	ADA Stalls Provided	1	

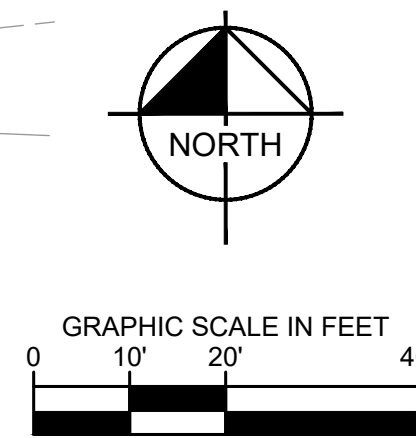
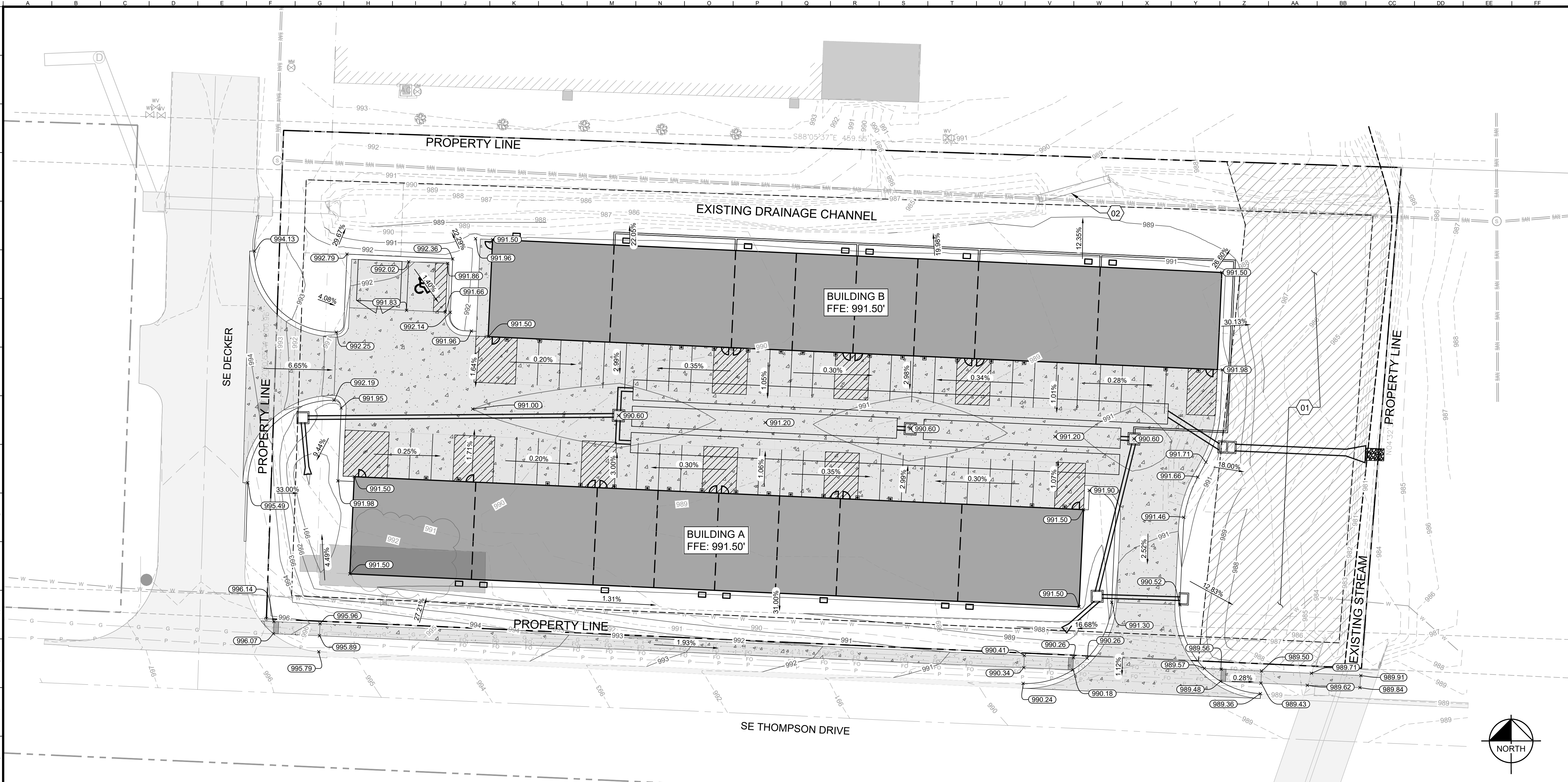
GENERAL NOTES

1. ALL DIMENSIONS REFER TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
2. BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
3. B/L REFERS TO THE BUILDING SETBACK LINE.
4. U/E REFERS TO THE UTILITY EASEMENT LINE.
5. RADII ADJACENT TO PARKING STALL AND NOT DIMENSIONED ON THIS PLAN SHALL BE 3-FEET, TYPICAL.
6. ALL PROPOSED ON-SITE STRIPING SHALL BE PAINTED UNLESS OTHERWISE NOTED.



C003	SHEET NUMBER	KHA PROJECT NO. 26844-2000	ORIGINAL ISSUE: 4/29/2024
LEE'S SUMMIT FLEX SPACE 60 SE THOMPSON DR LEE'S SUMMIT, MISSOURI 64081			
SITE PLAN			
CAPITAL BUILDERS			
PATRICK JOYCE No. PB-2009-0037 4/29/2024			
SCALE: DESIGNED BY: LLG DRAWN BY: LLG CHECKED BY: PUJ Kimley»Horn 500 N. G. STREET, SUITE 100 KANSAS CITY, MO 64105 WWW.KIMLEY-HORN.COM			
No.	REVISIONS		DATE BY

Drawing name: K:\K4C_LIEV\20844000_Capital Builders Lee's Summit\2023\Lee's Summit\2023\Grading\Grading Plan.dwg Apr 26, 2024, 2:58pm by: sagan green
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PAVING, GRADING AND DRAINAGE NOTES

- ALL PAVING, CONSTRUCTION, MATERIALS, AND WORKMANSHIP WITHIN COUNTY'S RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH LOCAL OR COUNTY SPECIFICATIONS AND STANDARDS (LATEST EDITION) OR MODOT SPECIFICATIONS AND STANDARDS (LATEST EDITION) IF NOT COVERED BY LOCAL OR COUNTY REGULATIONS.
- ALL UNPAVED AREAS IN EXISTING RIGHTS-OF-WAY DISTURBED BY CONSTRUCTION SHALL BE REGRADED AND SODDED.
- TRAFFIC CONTROL ON ALL MODOT, LOCAL AND COUNTY RIGHTS-OF-WAY SHALL MEET THE REQUIREMENTS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (U.S. DOT/FHA) AND THE REQUIREMENTS OF THE STATE AND ANY LOCAL AGENCY HAVING JURISDICTION. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.
- THE CONTRACTOR SHALL GRADE THE SITE TO THE ELEVATIONS INDICATED AND SHALL REGRADE WASHOUTS WHERE THEY OCCUR AFTER EVERY RAINFALL UNTIL A GRASS STAND IS WELL ESTABLISHED OR ADEQUATE STABILIZATION OCCURS.
- ALL OPEN AREAS WITHIN THE PROJECT SITE SHALL BE SODDED UNLESS INDICATED OTHERWISE ON THE LANDSCAPE PLAN.
- ALL AREAS INDICATED AS PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TYPICAL PAVEMENT SECTIONS AS INDICATED ON THE DRAWINGS.
- WHERE EXISTING PAVEMENT IS INDICATED TO BE REMOVED AND REPLACED, THE CONTRACTOR SHALL SAW CUT A MINIMUM 2" DEEP FOR A SMOOTH AND STRAIGHT JOINT AND REPLACE THE PAVEMENT WITH THE SAME TYPE AND DEPTH OF MATERIAL AS EXISTING OR AS INDICATED.
- WHERE NEW PAVEMENT MEETS THE EXISTING PAVEMENT, THE CONTRACTOR SHALL SAW CUT THE EXISTING PAVEMENT A MINIMUM 2" DEEP FOR A SMOOTH AND STRAIGHT JOINT AND MATCH THE EXISTING PAVEMENT ELEVATION WITH THE PROPOSED PAVEMENT UNLESS OTHERWISE INDICATED.
- THE CONTRACTOR SHALL INSTALL FILTER FABRIC OVER ALL DRAINAGE STRUCTURES FOR THE DURATION OF CONSTRUCTION AND UNTIL ACCEPTANCE OF THE PROJECT BY THE OWNER. ALL DRAINAGE STRUCTURES SHALL BE CLEANED OF DEBRIS AS REQUIRED DURING AND AT THE END OF CONSTRUCTION TO PROVIDE POSITIVE DRAINAGE FLOWS.
- IF DEWATERING IS REQUIRED, THE CONTRACTOR SHALL OBTAIN ANY APPLICABLE REQUIRED PERMITS. THE CONTRACTOR IS TO COORDINATE WITH THE OWNER AND THE DESIGN ENGINEER PRIOR TO ANY EXCAVATION.
- STRIP TOPSOIL AND ORGANIC MATTER FROM ALL AREAS OF THE SITE AS REQUIRED. IN SOME CASES TOPSOIL MAY BE STOCKPILED ON SITE FOR PLACEMENT WITHIN LANDSCAPED AREAS BUT ONLY AS DIRECTED BY THE OWNER.
- FIELD DENSITY TESTS SHALL BE TAKEN AT INTERVALS IN ACCORDANCE WITH THE LOCAL JURISDICTIONAL AGENCY OR TO KDOT STANDARDS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.
- ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED AS PER PLANS. THE AREAS SHALL THEN BE SODDED OR SEEDED AS SPECIFIED IN THE PLANS, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE JOB SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. ALL EARTHEN AREAS WILL BE SODDED OR SEEDED AND MULCHED AS SHOWN ON THE LANDSCAPING PLAN.
- ALL CUT OR FILL SLOPES SHALL BE 4 (HORIZONTAL) : 1 (VERTICAL) OR FLATTER UNLESS OTHERWISE SHOWN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AND DIRT RISING AND SCATTERING IN THE AIR DURING CONSTRUCTION AND SHALL PROVIDE WATER SPRINKLING OR OTHER SUITABLE METHODS OF CONTROL. THE CONTRACTOR SHALL COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.
- THE CONTRACTOR SHALL TAKE ALL REQUIRED MEASURES TO CONTROL TURBIDITY, INCLUDING BUT NOT LIMITED TO THE INSTALLATION OF TURBIDITY BARRIERS AT ALL LOCATIONS WHERE THE POSSIBILITY OF TRANSFERRING SUSPENDED SOLIDS INTO THE RECEIVING WATER BODY EXISTS DUE TO THE PROPOSED WORK. TURBIDITY BARRIERS MUST BE MAINTAINED IN EFFECTIVE CONDITION AT ALL LOCATIONS UNTIL CONSTRUCTION IS COMPLETED AND DISTURBED SOIL AREAS ARE STABILIZED. THEREAFTER, THE CONTRACTOR MUST REMOVE THE BARRIERS. AT NO TIME SHALL THERE BE ANY OFF-SITE DISCHARGE WHICH VIOLATES THE WATER QUALITY STANDARDS PER MISSOURI DEPARTMENT OF NATURAL RESOURCES.
- SOD, WHERE CALLED FOR, MUST BE INSTALLED AND MAINTAINED ON EXPOSED SLOPES WITHIN 48 HOURS OF COMPLETING FINAL GRADING, AND AT ANY OTHER TIME AS NECESSARY, TO PREVENT EROSION, SEDIMENTATION OR TURBID DISCHARGES.
- THE CONTRACTOR MUST REVIEW AND MAINTAIN A COPY OF THE ENVIRONMENTAL RESOURCE PERMIT COMPLETE WITH ALL CONDITIONS, ATTACHMENTS, EXHIBITS, AND PERMIT MODIFICATIONS IN GOOD CONDITION AT THE CONSTRUCTION SITE. THE COMPLETE PERMIT MUST BE AVAILABLE FOR REVIEW UPON REQUEST BY WATER MANAGEMENT DISTRICT REPRESENTATIVES.
- THE CONTRACTOR SHALL ENSURE THAT ISLAND PLANTING AREAS ARE NOT COMPACTED AND DO NOT CONTAIN ROAD BASE MATERIALS. THE CONTRACTOR SHALL ALSO EXCAVATE AND REMOVE ALL UNDESIRABLE MATERIAL FROM ALL AREAS ON THE SITE TO BE PLANTED AND PROPERLY DISPOSED OF IN A LEGAL MANNER.
- THE CONTRACTOR SHALL INSTALL ALL UNDERGROUND STORM WATER PIPING PER MANUFACTURER'S RECOMMENDATIONS.

GRADING LEGEND

- | | | |
|--|--------|------------------|
| | 1015 | EXISTING CONTOUR |
| | 1015 | PROPOSED CONTOUR |
| | XXX.XX | SPOT ELEVATION |
| | X.XX% | SLOPE ARROW |

GRADING PLAN KEY NOTES

- EXISTING RUBBLE SHALL BE HAULED AND DISPOSED OF PROPERLY OFFSITE.
- EXISTING CULVERT SHALL BE REMOVED. CONTRACTOR SHALL REGRADE TO MAINTAIN EXISTING DRAINAGE PATTERNS.

LIMITS OF DISTURBANCE: 1.81 AC

No.		REVISIONS		DATE	BY
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SCALE:	AS NOTED	DESIGNED BY: LLG	DRAWN BY: LLG	CHECKED BY: PUJ	
STATE OF MISSOURI PATRICK JOYCE REGISTERED PROFESSIONAL ENGINEER NUMBER PE-2009000025 4/29/2024					
CAPITAL BUILDERS					
GRADING PLAN					
LEE'S SUMMIT FLEX SPACE 60 SE THOMPSON DR LEE'S SUMMIT, MISSOURI 64081					
ORIGINAL ISSUE: 4/29/2024					
KHA PROJECT NO. 268442000					
SHEET NUMBER					
C004					

Technical drawing of a cross-section of a road and sidewalk showing ADA compliance features. The drawing includes a sidewalk on the left, a ramp labeled "ADA RAMP" with a 1.91% slope, a transition zone with a 0.75% slope, and a warning pad labeled "ADA WARNING PAD" with a 1.50% slope. A transition zone with a 0.10% slope leads to a road surface. Elevation markers include 990.41, 990.26, 990.34, and 990.18. Stationing markers 988, 989, and 990 are shown. The drawing also includes labels for "SIDEWALK", "TRANSITION ZONE", and "ADA RAMP".

Technical drawing of a cross-section of a road and sidewalk showing ADA compliance features. The drawing includes a road surface with a 0.30% slope, a 1.50% ADA ramp, and a 1.00% sidewalk slope. A transition zone is marked with a 0.79% slope. A dashed line indicates the ADA warning pad. Elevation markers include 989.56, 989.57, 989.50, 989.48, and 989.43. A 1.50% slope is also indicated for the ADA ramp. A 0.79% slope is shown for the transition zone. A 0.30% slope is shown for the road surface. A 1.00% slope is shown for the sidewalk. A 1.50% slope is shown for the ADA ramp. A dashed line indicates the ADA warning pad. Elevation markers include 989.56, 989.57, 989.50, 989.48, and 989.43.

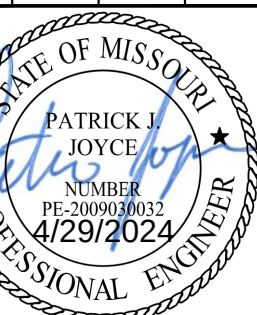
GRADING LEGEND

- EXISTING CONTOUR: A dashed line with a label '1015' above it.
- PROPOSED CONTOUR: A solid line with a label '1015' above it.
- SPOT ELEVATION: A rounded rectangle containing the text 'XXX.XX'.
- SLOPE ARROW: A horizontal line with a small vertical tick and a label 'X.XX%' below it.

01 INSTALL ADA SIDEWALK RAMP WITH WARNING PAD. REFER TO DETAIL 14, SHEET C011
02 INSTALL SIDEWALK WITH BUFFER. REFER TO DETAIL 12, SHEET C011

6001 LINCOLN AVENUE, SUITE 100
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PHONE: 816-652-0350
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CHECKED BY: PJJ



LEE'S SUMMIT
FLEX SPACE
60 SE THOMPSON DR
LEE'S SUMMIT, MISSOURI 64084

60 SE THOMPSON DR
LEE'S SUMMIT, MISSOURI 64081

ORIGINAL ISSUE:

4/29/2024

PROJECT NO.
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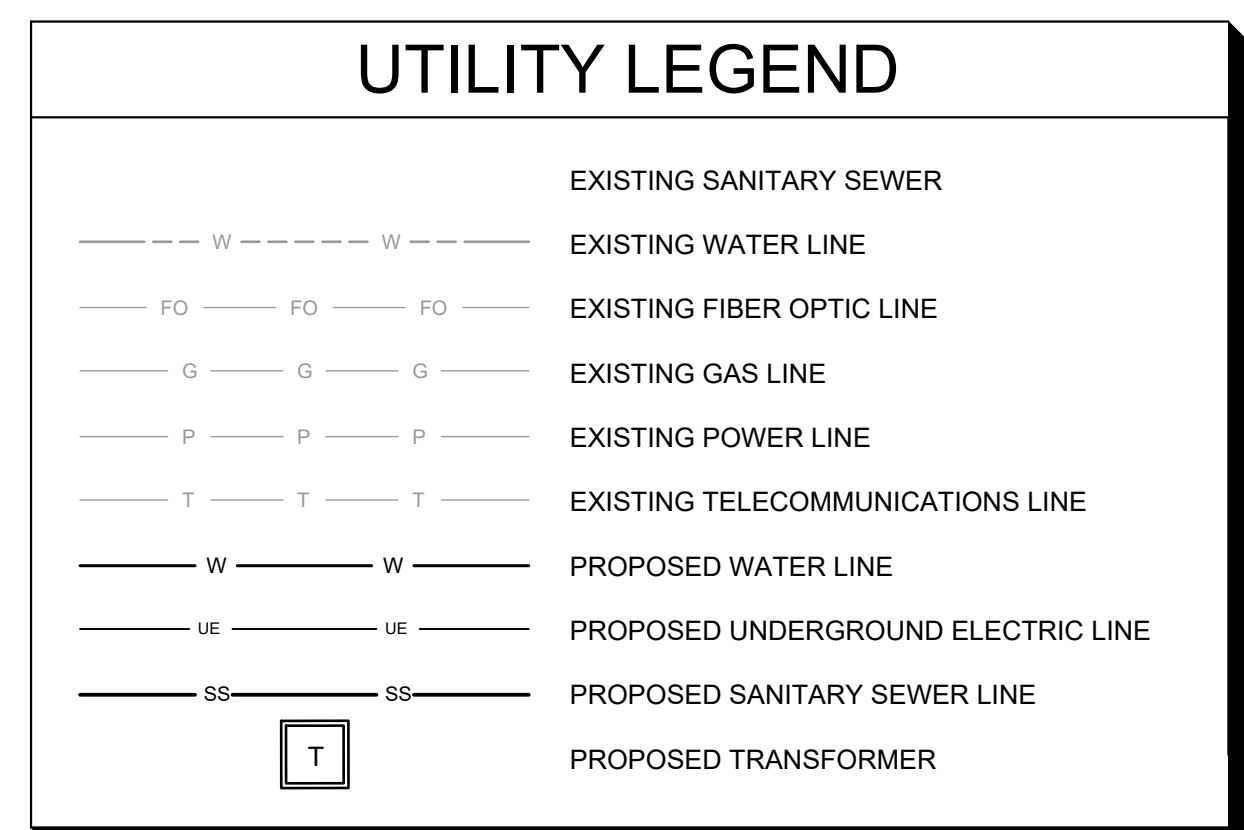
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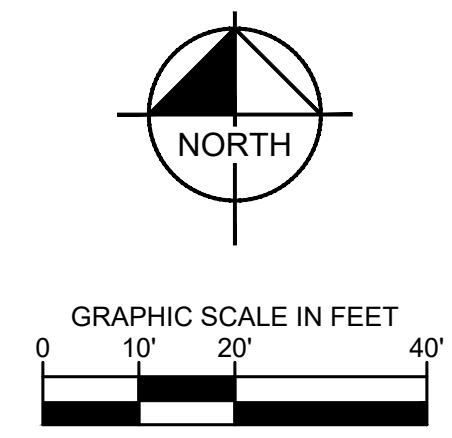
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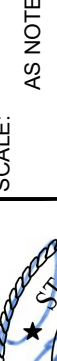
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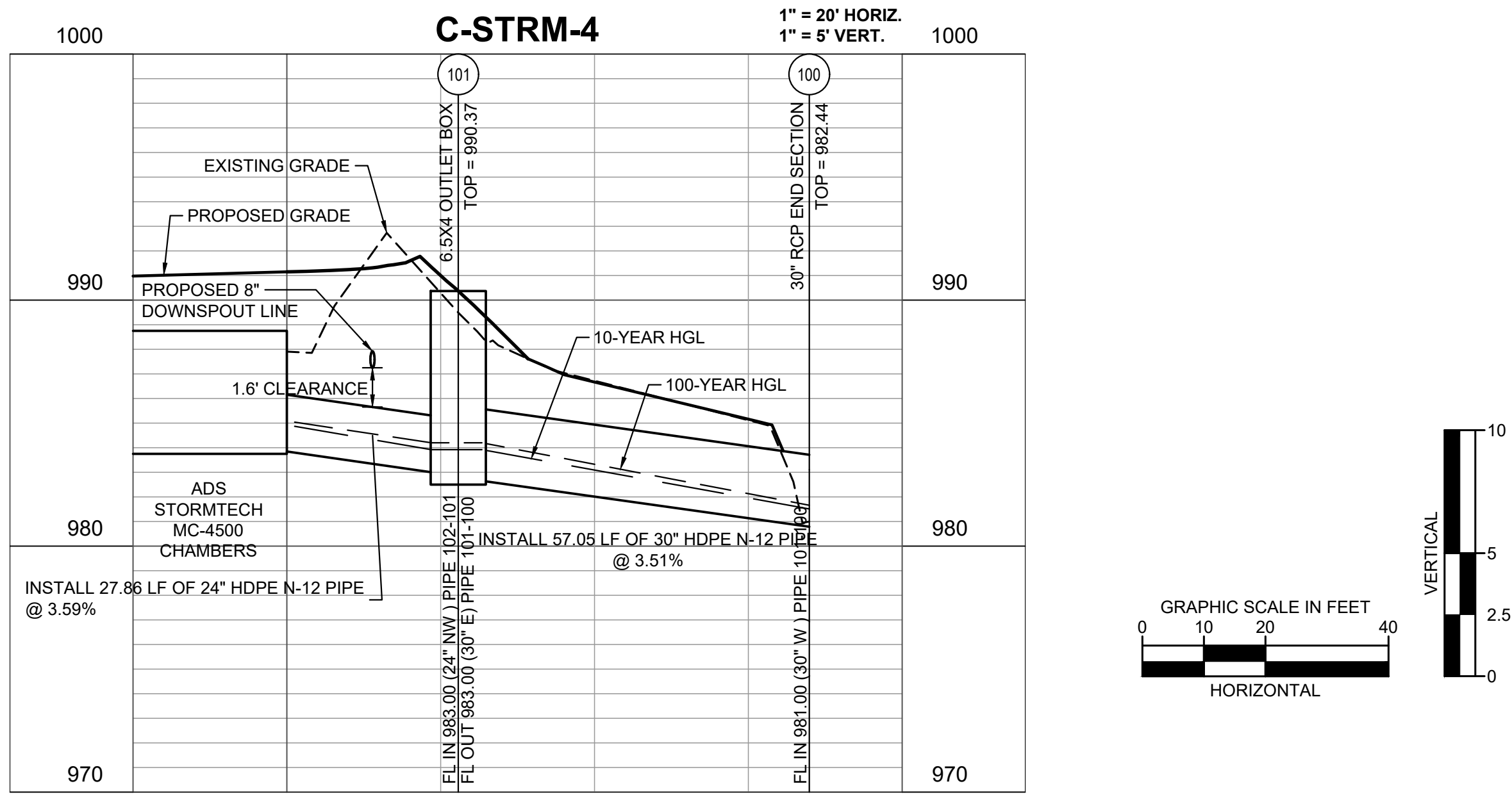
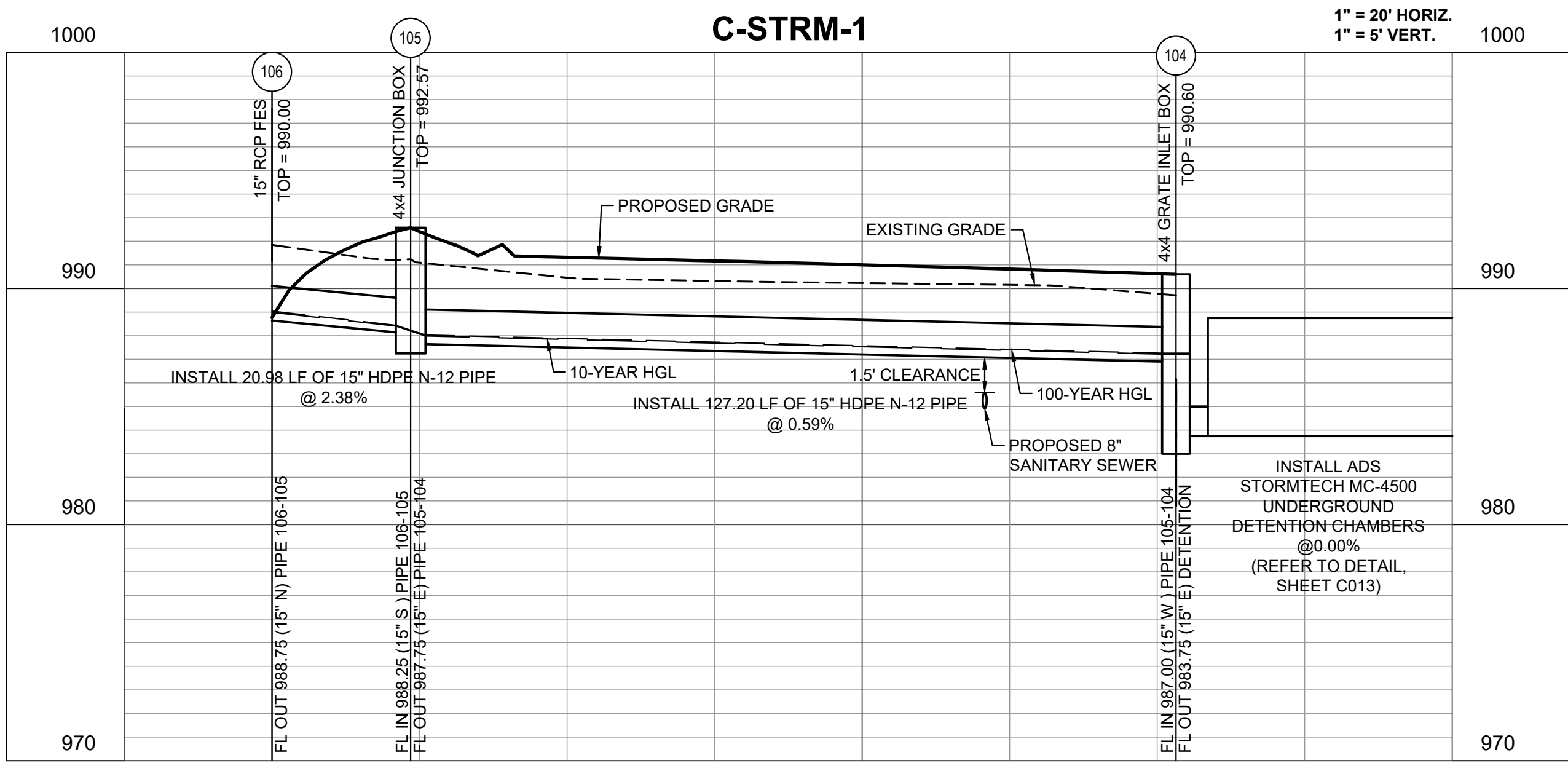
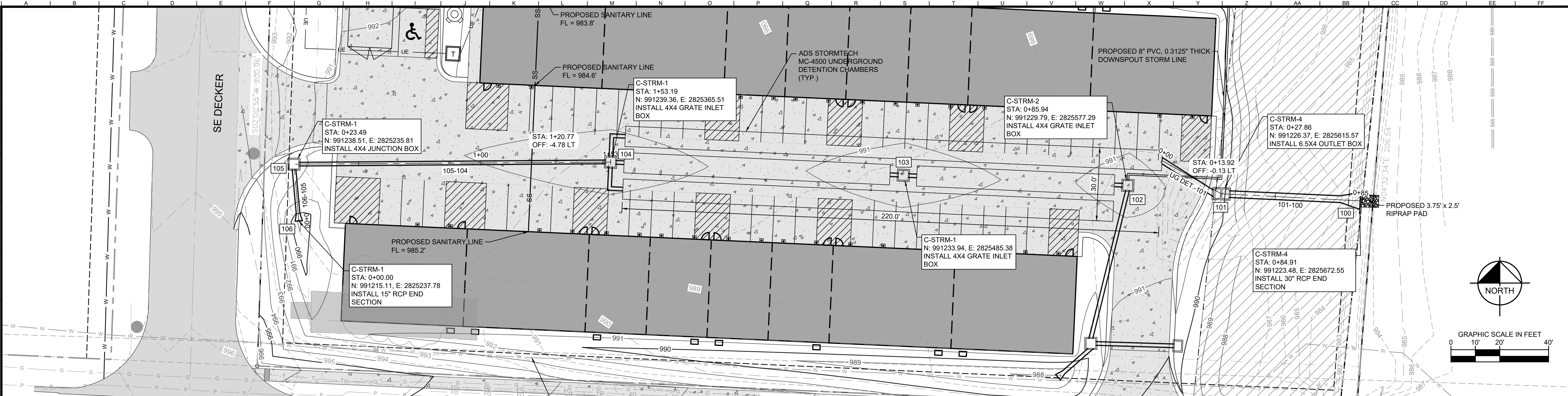
Rip-Rap Pad Sizing Calculations	
Max. Shear Stress: $\tau_d = Y \cdot d \cdot S$	
Flared-End Section 100:	
τ_d : (lb/ft ²)	1.889082
Y : (lb/ft ³)	62.4
d : (ft)	0.8625
S : (ft/ft)	0.0351
Max. Permissible Shear Strength for MODOT Type 3 Rock Ditch Liner: 4 lb/ft ²	

- | # | UTILITY PLAN KEY NOTES | <table border="1"> <tr> <td>$\tau_d: (lb/ft^2)$</td> <td>1.889082</td> </tr> <tr> <td>$\gamma: (lb/ft^3)$</td> <td>62.4</td> </tr> <tr> <td>$d: (ft)$</td> <td>0.8625</td> </tr> <tr> <td>$S: (ft/ft)$</td> <td>0.0351</td> </tr> <tr> <td colspan="2">Max. Permissible Shear Strength for MODOT Type 3
Rock Ditch Liner: 4 lb/ft²</td> </tr> </table> | $\tau_d: (lb/ft^2)$ | 1.889082 | $\gamma: (lb/ft^3)$ | 62.4 | $d: (ft)$ | 0.8625 | $S: (ft/ft)$ | 0.0351 | Max. Permissible Shear Strength for MODOT Type 3
Rock Ditch Liner: 4 lb/ft ² | |
|--|---|---|---------------------|----------|---------------------|------|-----------|--------|--------------|--------|--|--|
| $\tau_d: (lb/ft^2)$ | 1.889082 | | | | | | | | | | | |
| $\gamma: (lb/ft^3)$ | 62.4 | | | | | | | | | | | |
| $d: (ft)$ | 0.8625 | | | | | | | | | | | |
| $S: (ft/ft)$ | 0.0351 | | | | | | | | | | | |
| Max. Permissible Shear Strength for MODOT Type 3
Rock Ditch Liner: 4 lb/ft ² | | | | | | | | | | | | |
| 01 | INSTALL CONCRETE PLUG AND ABANDON EXISTING WATER LINE IN PLACE | | | | | | | | | | | |
| 02 | REMOVE EXISTING FIRE HYDRANT AND INSTALL CONCRETE PLUG, ABANDON EXISTING WATER LINE IN PLACE | | | | | | | | | | | |
| 03 | PUBLIC WATER MAIN EXTENSION TO BE DESIGNED UNDER SEPARATE COVER | | | | | | | | | | | |
| 04 | INSTALL 1.5" WATER METER WITH METER PIT. REFER TO DETAIL 9, SHEET C010 | | | | | | | | | | | |
| 05 | INSTALL 2" TYPE K COPPER SERVICE LINE. REFER TO DETAILS 5 AND 11, SHEET C010 | | | | | | | | | | | |
| 06 | INSTALL VAULT FOR DOUBLE DETECTOR CHECK VALVE. BACKFLOW VAULT SUMP SHALL BE DRAINED BY DAYLIGHT VIA A 3" SDR-26 PVC PIPE. FIRE LINE SHALL BE 6" SCHEDULE 40 BLACK STEEL TO BACKFLOW PREVENTER. REFER TO DETAIL 10, SHEET C010 | | | | | | | | | | | |
| 07 | INSTALL FIRE HYDRANT, ALL YELLOW, PER CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL SECTION 3901.Q. REFER TO DETAIL 8, SHEET C010 | | | | | | | | | | | |
| 08 | INSTALL TRANSFORMER WITH CONCRETE PAD FOOTING | | | | | | | | | | | |
| 09 | INSTALL 8" SDR-26 PVC DOWNSPOUT COLLECTOR STORM LINE AS SHOWN. REFER TO DETAILS 5 AND 11, SHEET C010 | | | | | | | | | | | |
| 10 | INSTALL ADS STORMTECH MC-4500 UNDERGROUND DETENTION CHAMBERS WITH ISOLATOR ROW AND END CAP IN LAYOUT AS SHOWN, OR APPROVED EQUAL. REFER TO ADS STORMTECH MC-4500 DETAIL, SHEET C009C | | | | | | | | | | | |
| 11 | INSTALL 6" SDR-26 PVC SANITARY SEWER LINE AND TIE IN TO EXISTING SANITARY SEWER LINE AT LOCATION SHOWN | | | | | | | | | | | |
| 12 | INSTALL UNDERGROUND ELECTRICAL CONDUIT LINE AS SHOWN | | | | | | | | | | | |
| 13 | INSTALL CUT-IN WYE SANITARY SEWER CONNECTION WITH STUB. REFER TO DETAIL 12, SHEET C010 | | | | | | | | | | | |
| 14 | INSTALL 3.75' X 2.5' PERMANENT MODOT TYPE 3 ROCK DITCH LINER PAD | | | | | | | | | | | |
| 15 | INSTALL FIRE HYDRANT, YELLOW BARREL WITH SILVER BONNET, PER CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL SECTION 3901.Q. REFER TO DETAIL 8, SHEET C010 | | | | | | | | | | | |
| 16 | INSTALL 2" TYPE K COPPER WATER LINE. REFER TO DETAILS 5 AND 11, SHEET C010 | | | | | | | | | | | |
| 17 | INSTALL 1.5" TYPE K COPPER WATER SERVICE LINE. REFER TO DETAILS 5 AND 11, SHEET C010 | | | | | | | | | | | |
| 18 | INSTALL FDC AT PROPOSED LOCATION WITH A KNOX BOX 6' AFF OVER THE FDC | | | | | | | | | | | |



SHEET NUMBER	KHA PROJECT NO. 268442000	ORIGINAL ISSUE: 4/29/2024	LEE'S SUMMIT FLEX SPACE 60 SE THOMPSON DR LEE'S SUMMIT, MISSOURI 64081	UTILITY & STORMWATER PLAN	CAPITAL BUILDERS		SCALE: AS NOTED DESIGNED BY: LLG DRAWN BY: LLG CHECKED BY: PUJ	Kimley»»Horn © 2023 KIMLEY HORN AND ASSOCIATES, INC. 905 PENNSYLVANIA AVENUE, SUITE 150 KANSAS CITY, MO 64105 WWW.KIMLEYHORN.COM	No.	REVISIONS	DATE	BY

Drawing name: K:\KAC_LIEV\2024\4000_Capital Builders Lee's Summit\2023 Lee's Summit Flex Space\2 Design\AD\Plan\Sheet\DP\007 - STORMWATER PLAN & PROFILE.dwg Apr 29, 2024 2:58pm by logan.green
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PIPE SIZING CALCULATIONS - 10-YEAR EVENT

LineNo.	InletID	RunoffCoeff (C)	DrainageArea (ac)	IncrCxA	InletTime (min)	TotalArea (ac)	TotalCxA	Tc (min)	iInlet (in/hr)	iSys (in/hr)	IncrQ (cfs)	FlowRate (cfs)	LineID	InvertUp (ft)	InvertDn (ft)	LineLength (ft)	LineSlope (%)	LineSize (in)	n-valuePipe	User StaDn (ft)	CapacityFull (cfs)	VelAve (ft/s)	HGLUp (ft)	HGLDn (ft)
1	105	0.00	0.00	0	0.0	0.07	0.05	6.1	0.00	7.03	0.00	0.37	PIPE 105-104	987.75	987.00	127.201	0.59	15	0.012	25.99	5.37	2.40	987.99	987.22
2	106	0.75	0.07	0.05	5.0	0.07	0.05	5.0	7.34	7.34	0.39	0.39	PIPE 106-105	988.75	988.25	20.981	2.38	15	0.012	0.00	10.80	3.23	988.99	988.41
3	201	0.00	0.00	0	0.0	0.30	0.27	7.4	0.00	6.69	0.00	1.82	PIPE 201-102	984.94	983.67	63.923	1.99	15	0.012	22.02	9.88	4.88	985.48	984.03
4	202	0.90	0.26	0.23	5.0	0.26	0.23	5.0	7.34	7.34	1.72	1.72	PIPE 202-201	986.62	986.43	19.454	0.98	15	0.012	0.00	6.91	4.11	987.14	986.86
5	301	0.95	0.04	0.04	5.0	0.04	0.04	5.0	7.34	7.34	0.28	0.28	PIPE 301-201	987.00	986.34	33.104	1.99	15	0.012	0.00	9.88	2.83	987.20	986.48
6	101	0.00	0.00	0	0.0	0.82	0.78	5.2	0.00	7.27	1.62	7.66	PIPE 101-100	983.00	981.00	57.051	3.51	30	0.012	0.00	83.19	7.62	983.92	981.51
7	UG DET.	0.95	0.82	0.78	5.0	0.82	0.78	5.0	7.34	7.34	6.09	6.09	PIPE 102-101	984.00	983.00	27.863	3.59	24	0.012	0.00	46.42	4.48	984.87 j	983.92

PIPE SIZING CALCULATIONS - 100-YEAR EVENT

LineNo.	InletID	RunoffCoeff (C)	DrainageArea (ac)	IncrCxA	InletTime (min)	TotalArea (ac)	TotalCxA	Tc (min)	iInlet (in/hr)	iSys (in/hr)	IncrQ (cfs)	FlowRate (cfs)	LineID	InvertUp (ft)	InvertDn (ft)	LineLength (ft)	LineSlope (%)	LineSize (in)	n-valuePipe	User StaDn (ft)	CapacityFull (cfs)	VelAve (ft/s)	HGLUp (ft)	HGLDn (ft)
1	105	0.00	0.00	0	0.0	0.07	0.05	5.8	0.00	10.02	0.00	0.53	PIPE 105-104	987.75	987.00	127.201	0.59	15	0.012	25.99	5.37	2.66	988.03	987.26
2	106	0.75	0.07	0.05	5.0	0.07	0.05	5.0	10.32	10.32	0.54	0.54	PIPE 106-105	988.75	988.25	20.981	2.38	15	0.012	0.00	10.80	3.57	989.04	988.44
3	201	0.00	0.00	0	0.0	0.30	0.27	6.7	0.00	9.69	0.00	2.64	PIPE 201-102	984.94	983.67	63.923	1.99	15	0.012	22.02	9.88	5.45	985.59	984.11
4	202	0.90	0.26	0.23	5.0	0.26	0.23	5.0	10.32	10.32	2.41	2.41	PIPE 202-201	986.62	986.43	19.454	0.98	15	0.012	0.00	6.91	4.55	987.24	986.94
5	301	0.95	0.04	0.04	5.0	0.04	0.04	5.0	10.32	10.32	0.39	0.39	PIPE 301-201	987.00	986.34	33.104	1.99	15	0.012	0.00	9.88	3.13	987.24	986.51
6	101	0.00	0.00	0	0.0	0.82	0.78	5.2	0.00	10.25	4.28	12.77	PIPE 101-100	983.00	981.00	57.051	3.51	30	0.012	0.00	83.19	8.87	984.20	981.66
7	UG DET.	0.95	0.82	0.78	5.0	0.82	0.78	5.0	10.32	10.32	8.54	8.54	PIPE 102-101	984.00	983.00	27.863	3.59	24	0.012	0.00	46.42	4.75	985.04 j	984.20

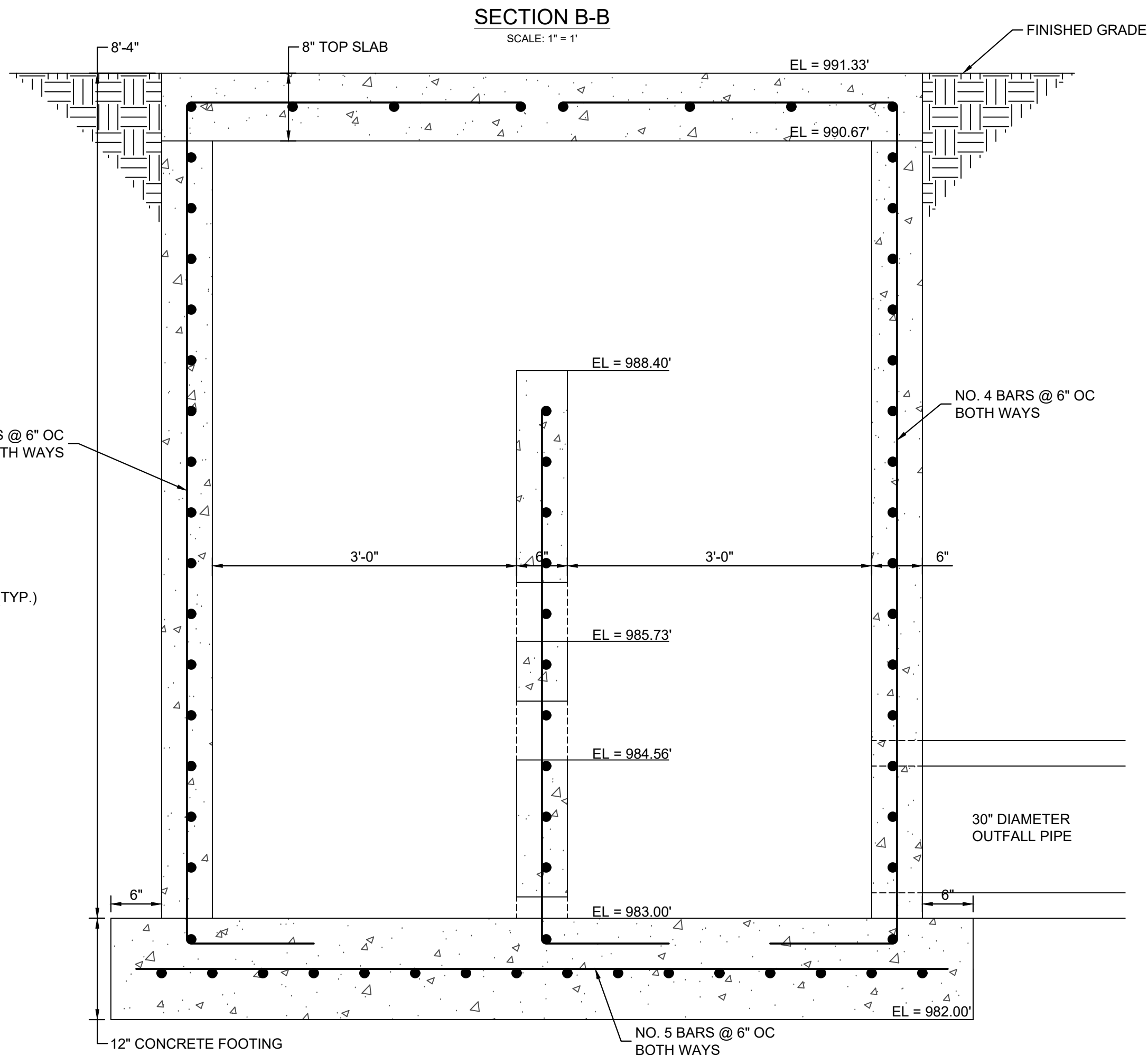
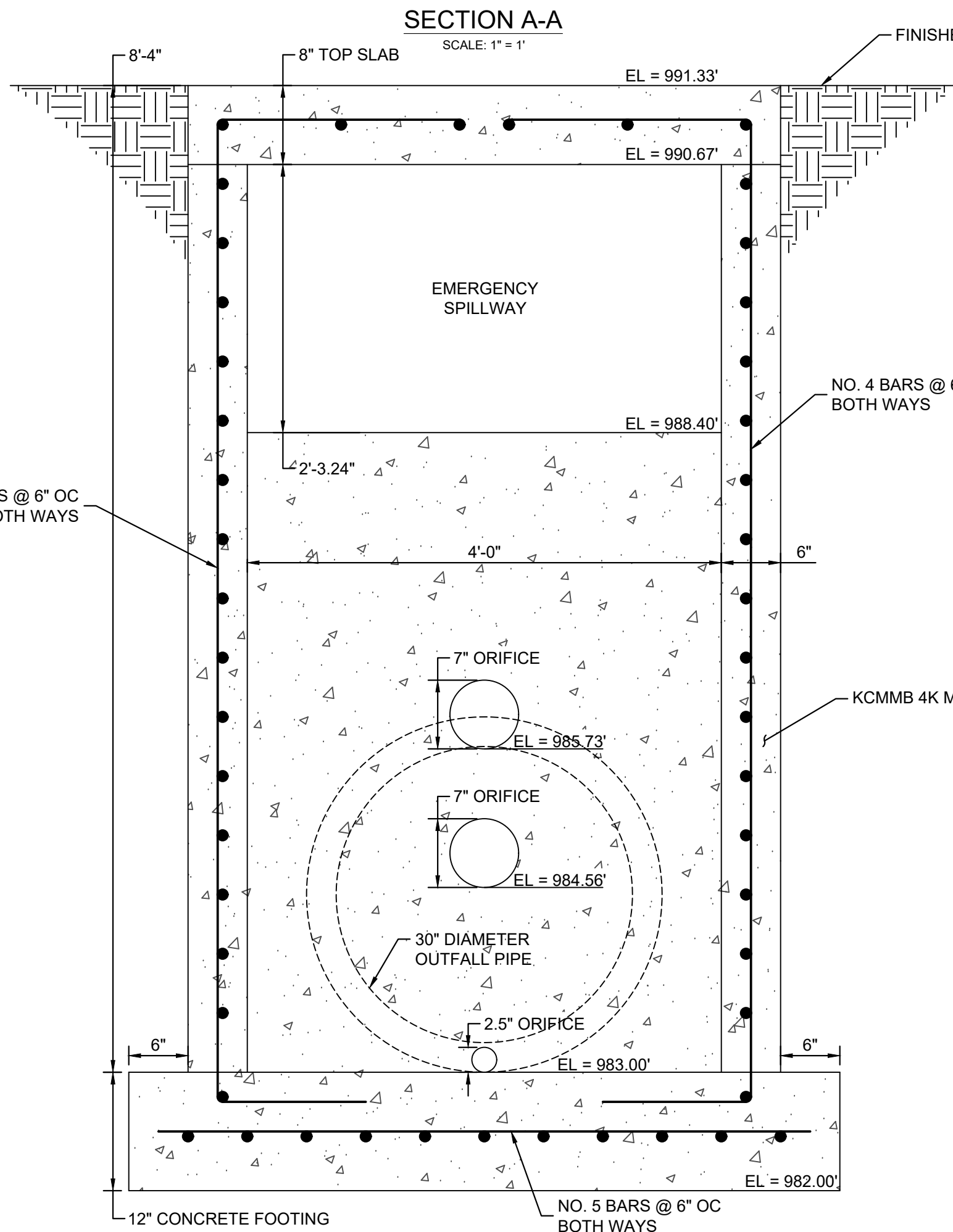
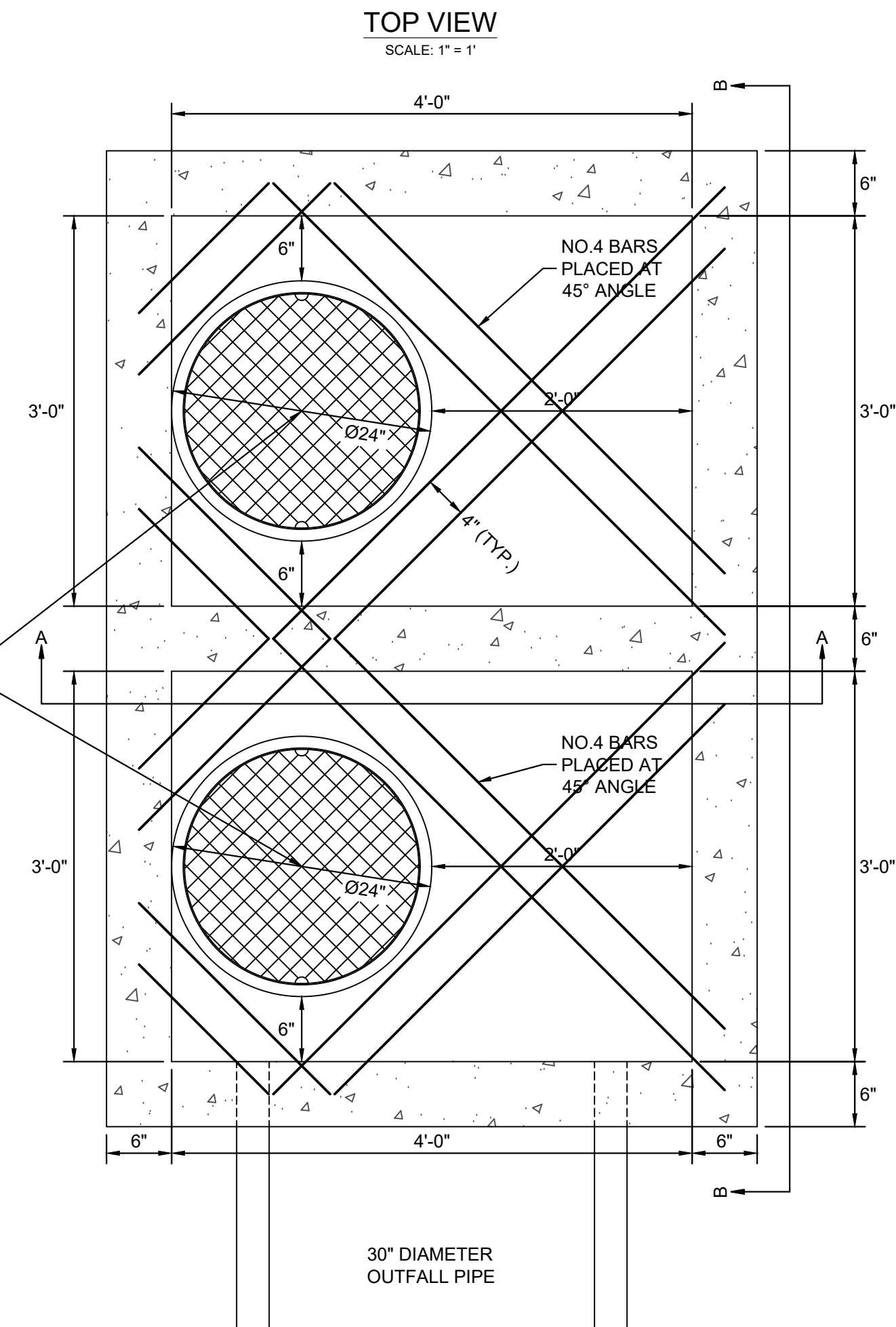
STORM SEWER CONSTRUCTION NOTES

- PIPE LENGTHS SHOWN ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE OR TO THE END OF END SECTION. ALL PIPES SHALL BE FIELD STAKED TO THE INSIDE WALL FACE OF THE STRUCTURE.
- ALL PIPE SHALL BE PLACED IN TRENCH CONDITIONS. PLACE A MINIMUM OF 2 FEET OF FILL OVER PROPOSED PIPE BEFORE TRENCHING AND PIPE INSTALLATION. PROPOSED FILL SHALL BE PLACED IN ACCORDANCE WITH PROJECT REQUIREMENTS.
- UTILITY LINES AND STRUCTURES IN FILL AREAS BELOW PIPE GRADE SHALL NOT BE CONSTRUCTED UNTIL ALL CONSOLIDATION OF THE FILL IS COMPLETE AND SO APPROVED BUY THE ON-SITE GEOTECHNICAL ENGINEER.
- THE DIMENSIONS FOR ALL STRUCTURES ARE FROM INSIDE FACE OF STRUCTURE TO INSIDE FACE OF STRUCTURE.
- STORM SEWER PIPE SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:
 - REINFORCED CONCRETE PIPE (RCP), CLASS III PER ASTM C-76, WITH "O-RING" OR SINGLE OFFSET RUBBER GASKETED JOINT (TYLOX SUPERSEAL OR AN APPROVED EQUAL).
 - ALL REINFORCING STEEL SHALL COMPLY WITH ASTM-615 GRADE 60.
 - ALL CURB INLETS AND OTHER STRUCTURES SET AT LOW POINTS ARE TO BE SET LEVEL. ALL OTHER CURB INLETS ARE TO BE SET WITH THE GRADE OF THE TOP OF CURB OR PAVEMENT.
 - ALL HYDRAULIC GRADE LINES (HGL) SHOWN ARE FOR THE 10 AND 100-YEAR STORM.
 - PRECAST STRUCTURES MAY BE USED AT CONTRACTOR'S OPTION. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED CONCRETE INVERT FROM INVERT IN TO INVERT OUT.
 - THE LIDS OF ALL PRECAST STRUCTURES SHALL BE GROUTED TO THE TOP OF THE WALLS.
 - NORTHING AND EASTINGS SHOWN ARE TO CENTER OF STRUCTURE, OR END OF END SECTION.
- THE FIRST DIMENSION SHOWN IS THE "L" DIMENSION AND THE SECOND IS THE "W" DIMENSION. SEE DETAILS.
- ALL HDPE PIPE SHALL BE IN ADS N-12, OR APPROVED EQUAL, MEETING AASHTO M294, TYPE S OR ASTM F2306. THE PIPE SHALL HAVE A SMOOTH INTERIOR AND ANNUAL EXTERIOR CORRUGATIONS. PIPE JOINTS SHALL BE JOINED USING A BELL & SPIGOT JOINT MEETING AASHTO M252, AASHTO M294, OR ASTM F2306. THE JOINT SHALL BE WATERTIGHT, ACCORDING TO THE REQUIREMENTS OF ASTM D 3212, AND GASKETS SHALL MEET THE REQUIREMENTS OF ASTM F477. GASKETS SHALL BE INSTALLED BY THE PIPE MANUFACTURER AND COVERED WITH A REMOVABLE WRAP TO ENSURE THE GASKET IS FREE FROM DEBRIS. A JOINT LUBRICANT SUPPLIED BUY THE MANUFACTURER SHALL BE USED ON THE GASKET AND BELL DURING ASSEMBLY.
- FITTINGS FOR PLASTIC PIPE SHALL CONFORM TO AASHTO M252, AASHTO M294, OR ASTM F2306. ALL TEES SHALL BE DUAL WALL REDUCING TEES CONSISTENT WITH THE ADS N-12 PIPE WATERTIGHT CONNECTIONS.

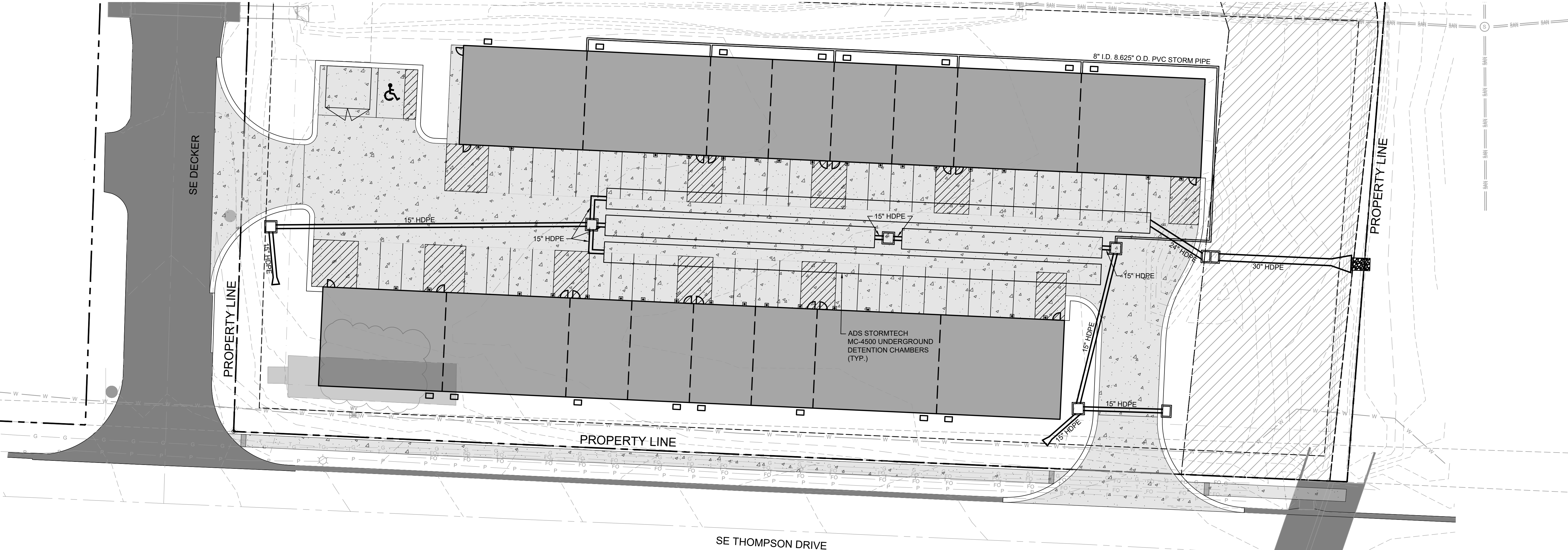
DESIGNED BY: LLG	DRAWN BY: LLG	CHECKED BY: PUJ
AS NOTED	SCALE: 1" = 20' HORIZ. 1" = 5' VERT.	NO.
REVISIONS		
DATE		
BY		
Kimley»Horn		
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PATRICK JOYCE REGISTERED PROFESSIONAL ENGINEER NO. 000000000 EXPIRATION DATE 12/29/2024		
CAPITAL BUILDERS		
STORMWATER PLAN & PROFILE		
LEE'S SUMMIT FLEX SPACE		
60 SE THOMPSON DR LEE'S SUMMIT, MISSOURI 64081		
ORIGINAL ISSUE: 4/29/2024		
KHA PROJECT NO. 268442000		
SHEET NUMBER		
C007		

Drawing name: K:\KAC_LIE\208442000_Lee's Summit Flex Space\2 Design\CAD\Plan\Sheet\CDPC009 - DETAILS.dwg C009A - STORMWATER BMP Apr 29, 2024, 2:58pm by: logan green
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24" DIA. STORM SEWER
MANHOLES. REFER TO
DETAILS 6 AND 7,
SHEET C009

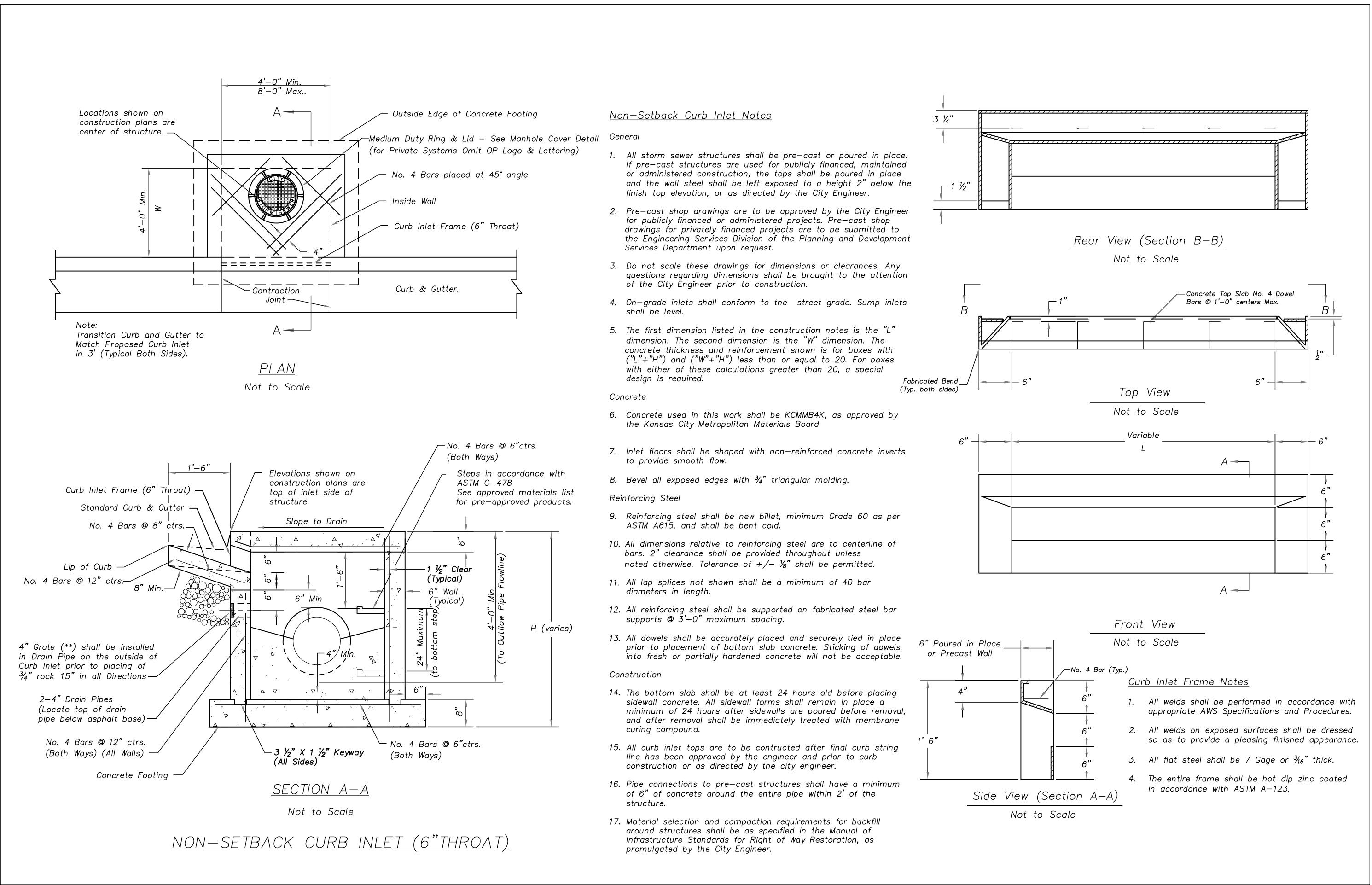


1 STRUCTURE 101 - DETENTION OUTLET CONTROL STRUCTURE DETAIL
SCALE: 1" = 1'

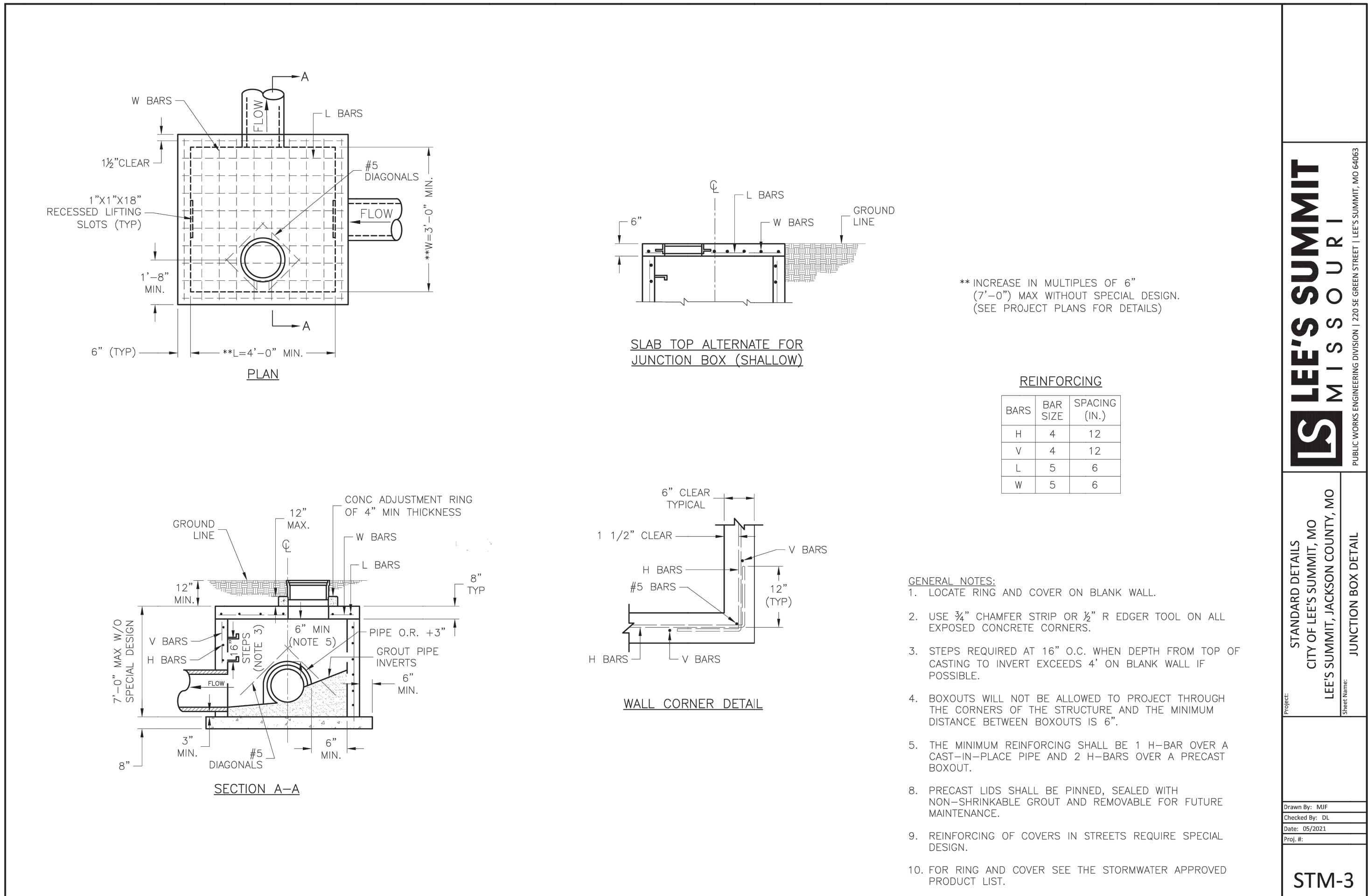


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CAPITAL BUILDERS	
STORMWATER BMP	
LEE'S SUMMIT FLEX SPACE 60 SE THOMPSON DR LEE'S SUMMIT, MISSOURI 64081	
ORIGINAL ISSUE: 4/29/2024	
KHA PROJECT NO. 268442000	
SHEET NUMBER C009A	

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2 NON-SETBACK CURB INLET DETAIL
SCALE: NOT TO SCALE



3 JUNCTION BOX DETAIL
SCALE: NOT TO SCALE

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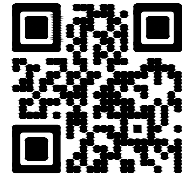
CAPITAL BUILDERS

DETAILS

LEE'S SUMMIT FLEX SPACE
60 SE THOMPSON DR
LEE'S SUMMIT, MISSOURI 64081

ORIGINAL ISSUE:
4/29/2024
KHA PROJECT NO.
268442000
SHEET NUMBER

C009B



MC-4500 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH MC-4500.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT²%, THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-4500 CHAMBER SYSTEM

- STORMTECH MC-4500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM - 9" (230 mm) SPACING BETWEEN THE CHAMBER ROWS.
- INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
- STONE SHALL BE BROUGHT UP EVENLY AROUND CHAMBERS SO AS NOT TO DISTORT THE CHAMBER SHAPE. STONE DEPTHS SHOULD NEVER DIFFER BY MORE THAN 12" (300 mm) BETWEEN ADJACENT CHAMBER ROWS.
- STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIAL BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - THE USE OF EQUIPMENT OVER MC-4500 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER TIERED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.
- USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

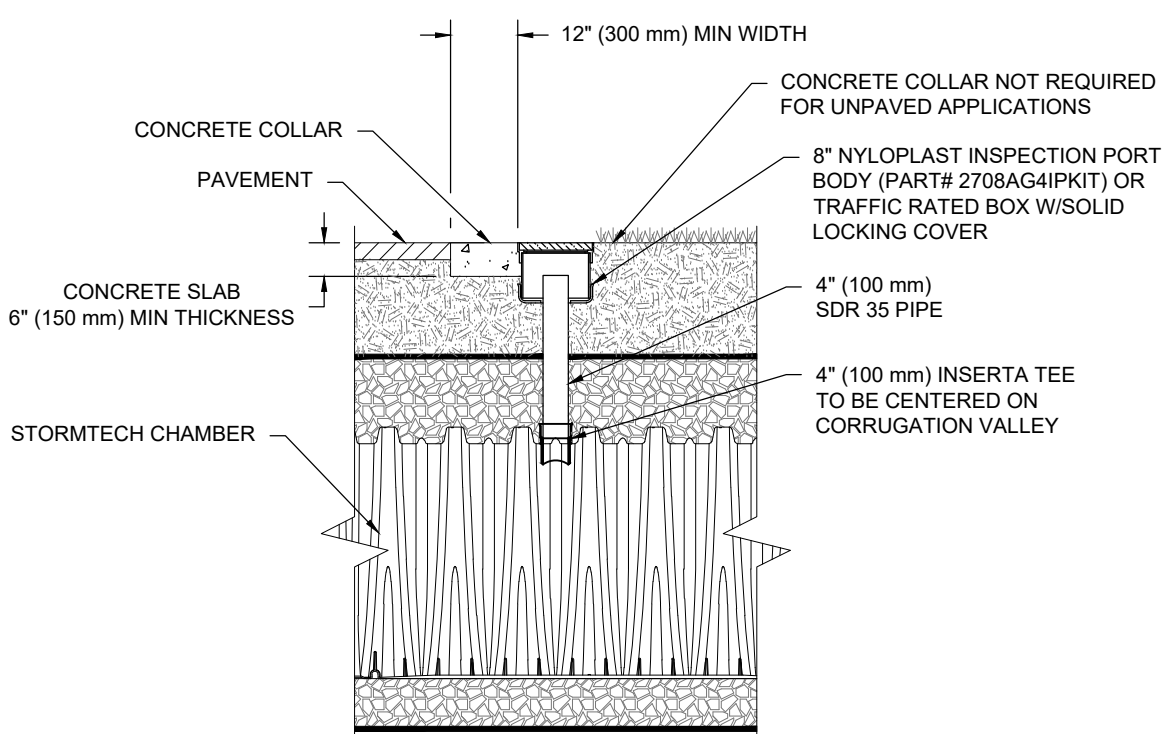
INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
- A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
- A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
- A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
- A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
- A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
- B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
- B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
- i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
- ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
- B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

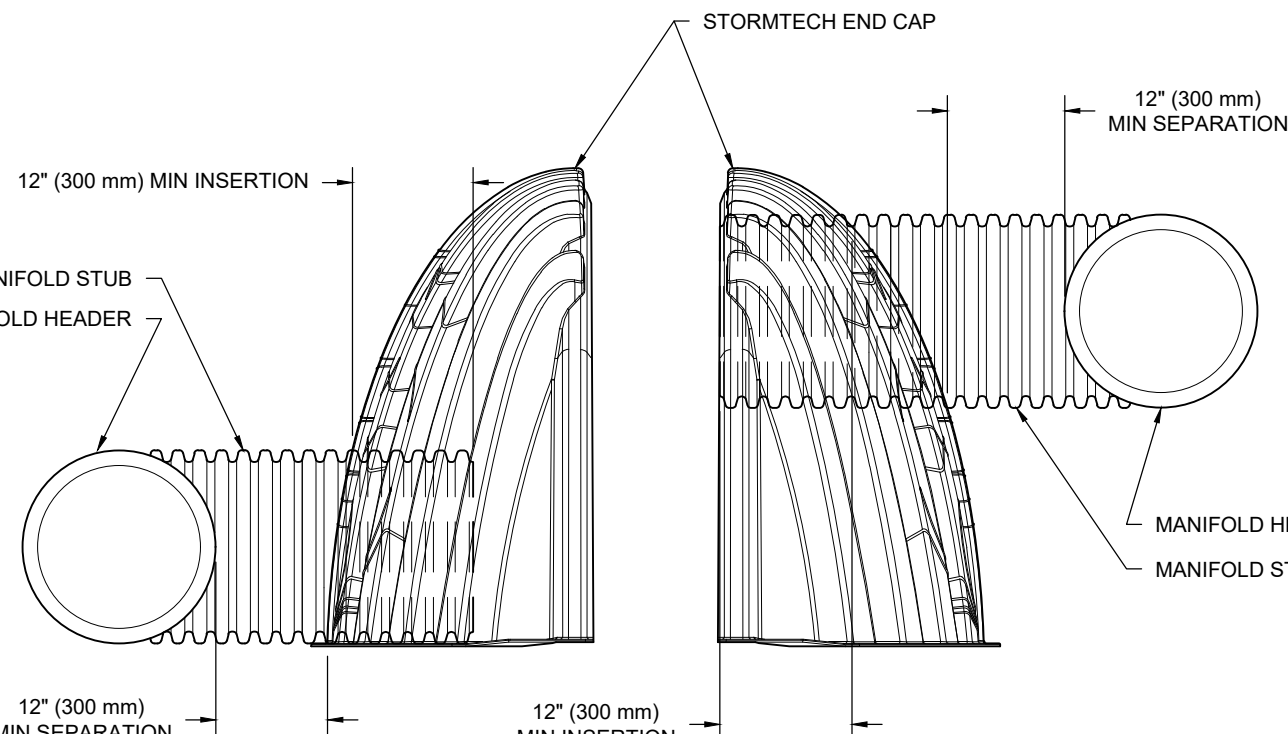
NOTES

- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

MC-4500 ISOLATOR ROW PLUS DETAIL



NOTE:
INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION VALLEY.



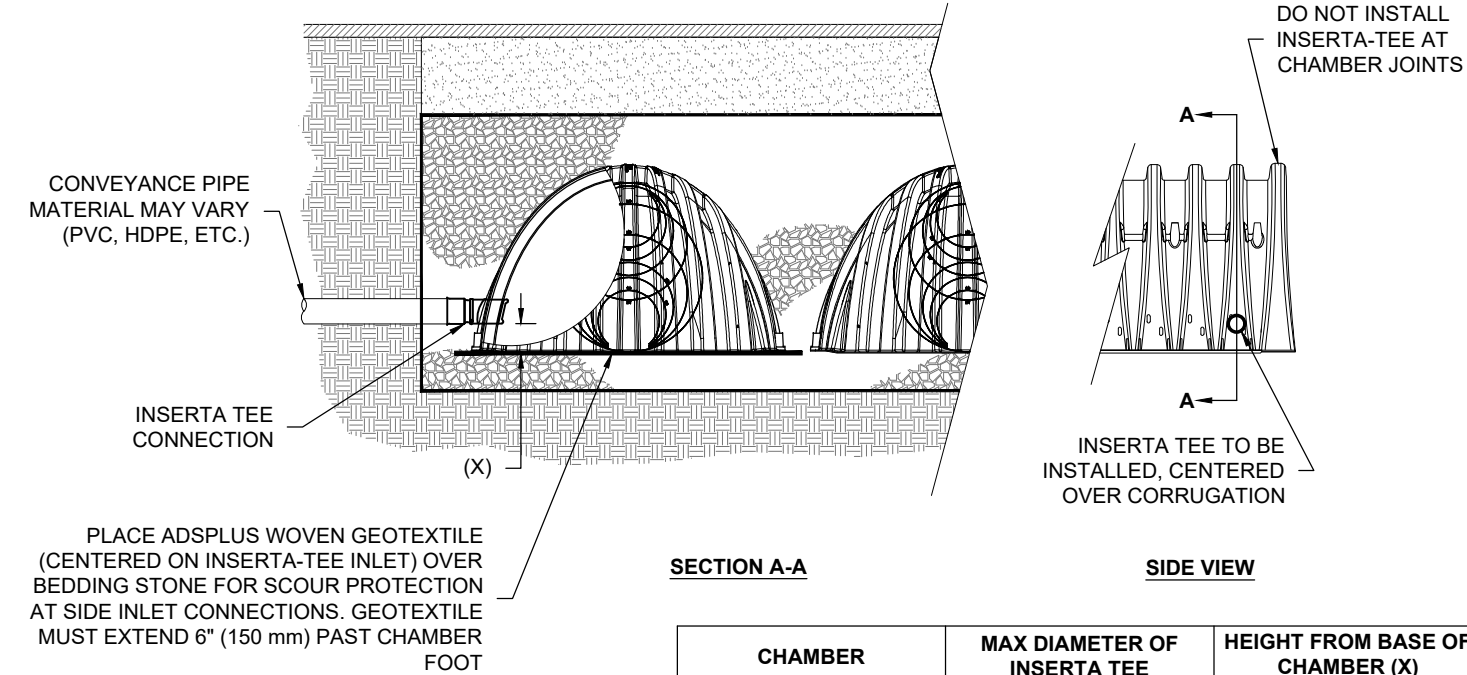
NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

4" PVC INSPECTION PORT DETAIL (MC SERIES CHAMBER)

MC-SERIES END CAP INSERTION DETAIL

5

UNDERDRAIN DETAIL



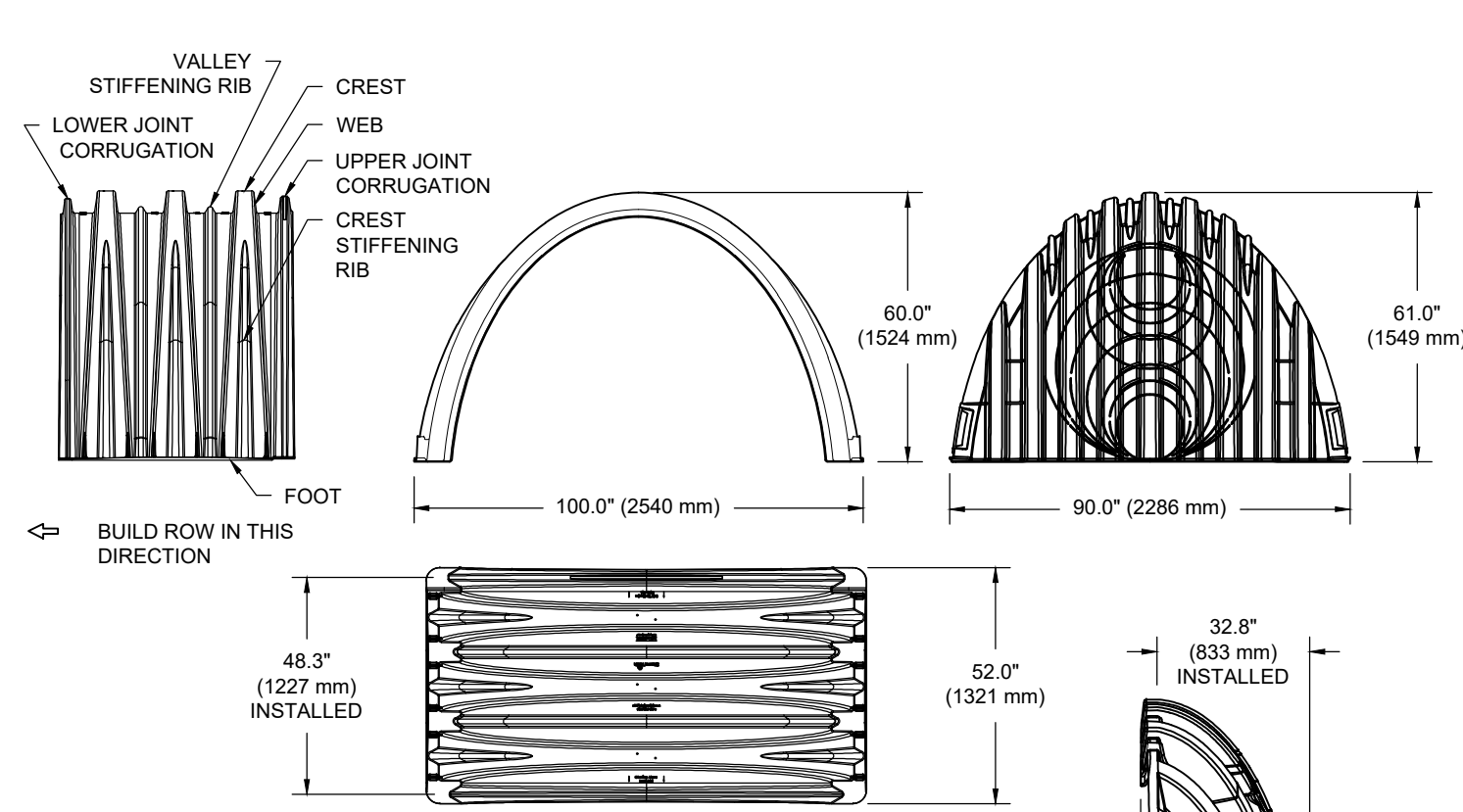
CHAMBER	MAX DIAMETER OF INSERTA TEE	HEIGHT FROM BASE OF CHAMBER (X)
SC-310	6" (150 mm)	4" (100 mm)
SC-740	10" (250 mm)	4" (100 mm)
DC-780	10" (250 mm)	4" (100 mm)
MC-3500	12" (300 mm)	6" (150 mm)
MC-4500	12" (300 mm)	8" (200 mm)
MC-7200	12" (300 mm)	8" (200 mm)

INSERTA TEE FITTINGS AVAILABLE FOR SDR 26, SDR 35, SCH 40 IPS GASKETED & SOLVENT WELD, N-12, HP STORM, C-900 OR DUCTILE IRON

- NOTES:
- PART NUMBERS WILL VARY BASED ON INLET PIPE MATERIALS. CONTACT STORMTECH FOR MORE INFORMATION.
 - CONTACT ADS ENGINEERING SERVICES IF INSERTA TEE INLET MUST BE RAISED AS NOT ALL INVERTS ARE POSSIBLE.

6

INSERTA-TEE SIDE INLET DETAIL



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	100.0" X 60.0" X 48.3"	(2540 mm X 1524 mm X 1227 mm)
CHAMBER STORAGE	106.5 CUBIC FEET	(3.01 m ³)
MINIMUM INSTALLED STORAGE*	162.6 CUBIC FEET	(4.60 m ³)
WEIGHT (NOMINAL)	125.0 lbs.	(56.7 kg)

NOMINAL END CAP SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	90.0" X 61.0" X 32.8"	(2286 mm X 1549 mm X 833 mm)
END CAP STORAGE	39.5 CUBIC FEET	(1.12 m ³)
MINIMUM INSTALLED STORAGE*	115.3 CUBIC FEET	(3.26 m ³)
WEIGHT (NOMINAL)	90 lbs.	(40.8 kg)

*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION AND BETWEEN CHAMBERS, 12" (305 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY.

PARTIAL CUT HOLES AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"

PARTIAL CUT HOLES AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

PART #	STUB	B	C
MC4500IEPP06T	6" (150 mm)	42.54" (1081 mm)	---
MC4500IEPP06B	---	---	0.86" (22 mm)
MC4500IEPP08T	8" (200 mm)	40.50" (1029 mm)	---
MC4500IEPP08B	---	---	1.01" (26 mm)
MC4500IEPP10T	10" (250 mm)	38.37" (975 mm)	---
MC4500IEPP10B	---	---	1.33" (34 mm)
MC4500IEPP12T	12" (300 mm)	35.69" (907 mm)	---
MC4500IEPP12B	---	---	1.55" (39 mm)
MC4500IEPP15T	15" (375 mm)	32.72" (831 mm)	---
MC4500IEPP15B	---	---	1.70" (43 mm)
MC4500IEPP18T	18" (450 mm)	29.36" (746 mm)	---
MC4500IEPP18B	---	---	1.97" (50 mm)
MC4500IEPP24T	24" (600 mm)	23.05" (585 mm)	---
MC4500IEPP24B	---	---	2.26" (57 mm)
MC4500IEPP30B	30" (750 mm)	---	2.95" (75 mm)
MC4500IEPP36B	36" (900 mm)	---	3.25" (83 mm)
MC4500IEPP42B	42" (1050 mm)	---	3.55" (90 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL

CUSTOM PREFABRICATED INVERTS ARE AVAILABLE UPON REQUEST. INVERTED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-4500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

2

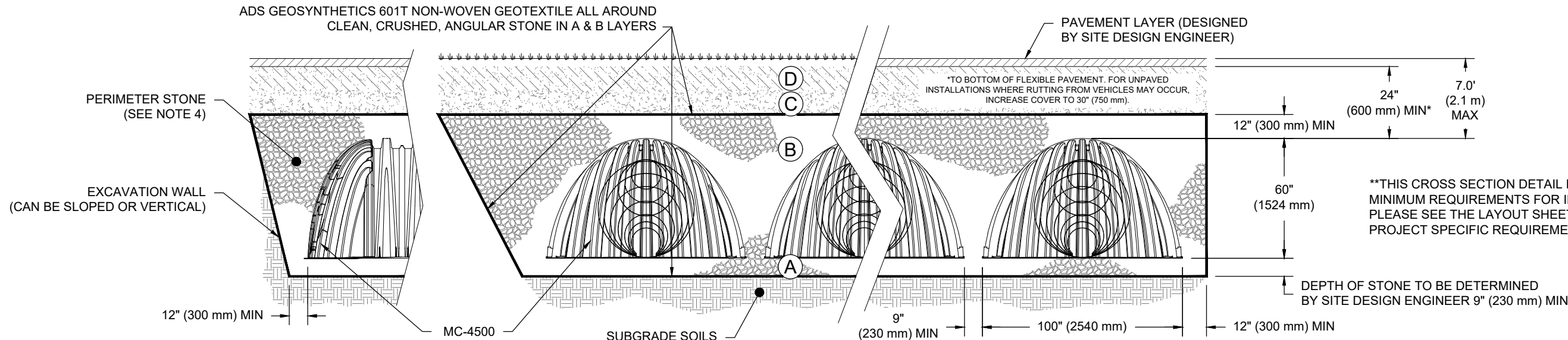
MC-4500 TECHNICAL SPECIFICATIONS

ACCEPTABLE FILL MATERIALS: STORMTECH MC-4500 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE.	AASHTO M145 ¹ A-1, A-2.4, A-3 OR AASHTO M43 ³ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 ³ 3, 4
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 ³ 3, 4

PLEASE NOTE:

- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
- WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101
- MC-4500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT²%, AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

MC-4500 CROSS SECTION DETAIL

DATE:

DRAWN:

PROJECT NO.:

REVIEWED:

REV.:

NOT TO SCALE

MC-4500 STANDARD DETAILS

StormTech[®]
Chamber System
888-892-2694 | WWW.STORMTECH.COM

4840 TRUEMAN BLVD
HILLIARD, OH 43026

ADS
Advanced Drainage Systems, Inc.

SHEET
C009C



- | | | | |
|---|--|--|---|
|  | <p align="center">LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063</p> | | Date: 08/2023
Drawn By: MJF
Checked By: GMB |
| | <p align="center">PIPE BEDDING DETAIL</p> | | <p align="center">GEN-6</p> |
| | Empty row for detail content | | |

	LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063	Drawn By: MJF
	STORM MANHOLE COVER DETAIL	Checked By: DL
		STM-6

	LEE'S SUMMIT MISSOURI	Date: 05/20/24 Drawn By: MJF Checked By: DL
	PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063	
	STORM MANHOLE FRAME DETAIL	
	DWG-7	

	LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063	Date: 08/2023 Drawn By: MJF Checked By: KLY
	HYDRANT - STRAIGHT SET	WAT-7

	LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 1202 SE GREEN STREET LEE'S SUMMIT, MO 64063	Date: 08/2023 Drawn By: MUF Checked By: KLY
	SERVICE CONNECTION WITH METER WELL	WAT-11

	LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063	Date: 08/2023 Drawn By: MJF Checked By: KLY
	VAULT FOR DOUBLE CHECK DETECTOR CHECK	WAT-12

	LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063		Date: 08/2023 Drawn By: MJF Checked By: AB
	SANITARY SEWER STUB DETAIL		SAN-1

[illegible]

Kimley»Horn
© 2023 KIMLEY-HORN AND ASSOCIATES, INC.
805 PENNSYLVANIA AVENUE, SUITE 150
KANSAS CITY, MO 64105
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WWW.KIMLEY-HORN.COM

SCALE:	AS NOTED
DESIGNED BY:	LLG
DRAWN BY:	LLG
CHECKED BY:	PJJ



CAPITAL BUILDERS

DETAILS

LEE'S SUMMIT
FLEX SPACE
60 SE THOMPSON DR
LEE'S SUMMIT, MISSOURI 64081

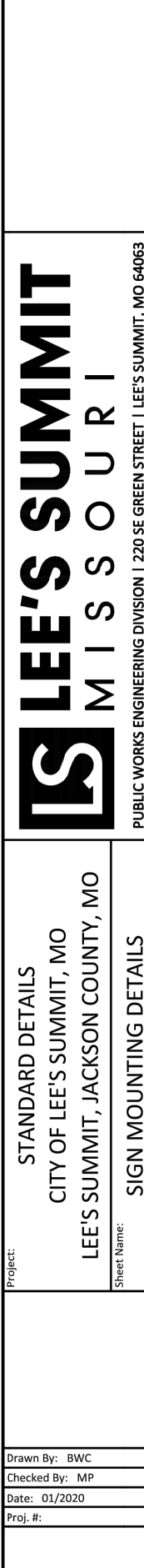
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ORIGINAL ISSUE:
4/29/2024

KHA PROJECT NO.
268442000

SHEET NUMBER

C010



16



18

19

21

ORIGINAL ISSUE: 4/29/2024	LEE'S SUMMIT FLEX SPACE 60 SE THOMPSON DR LEE'S SUMMIT, MISSOURI 64081	DETAILS	CAPITAL BUILDERS
KHA PROJECT NO. 268442000			
SHEET NUMBER			
C012			

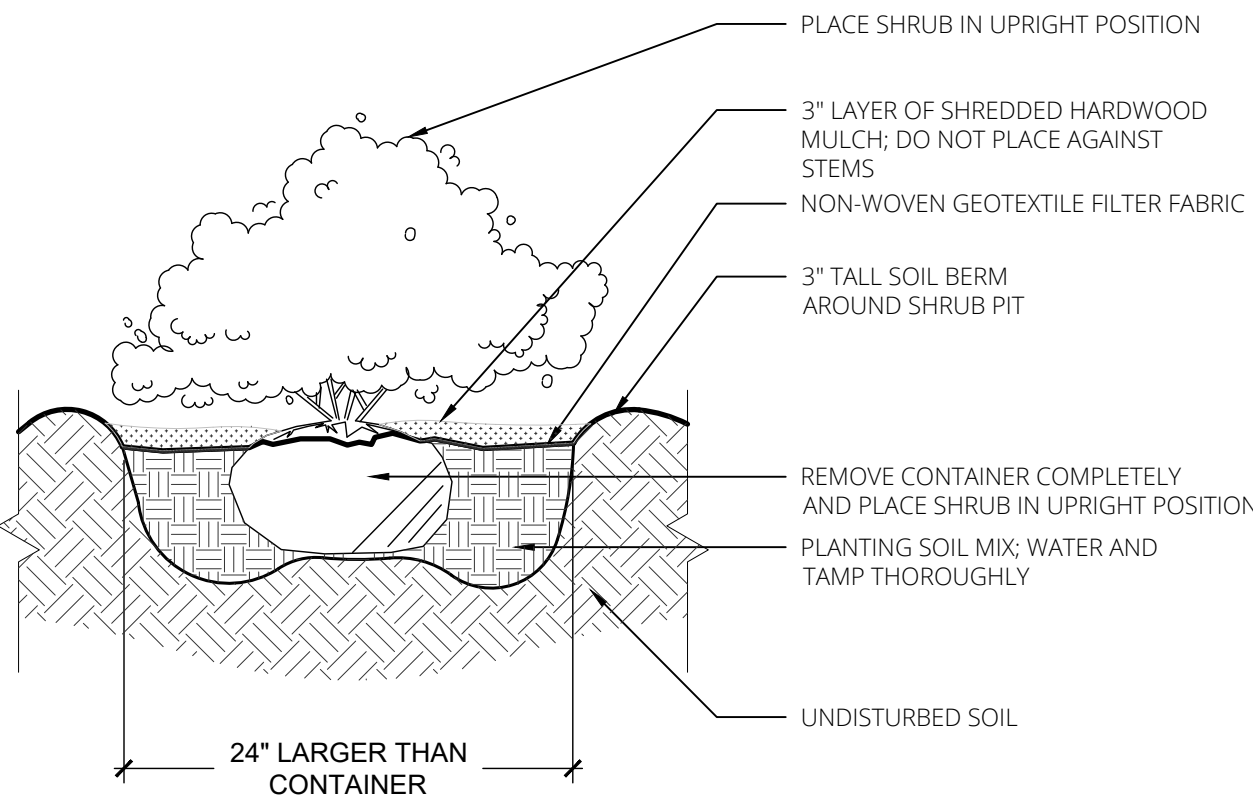
<u>STREET FRONTAGE</u>	
REQUIRED: 1 TREE PER 30 FEET OF FRONTAGE AND 1 SHRUB PER 20 FEET OF FRONTAGE.	
THOMPSON DRIVE	452 FEET / 30 = 15 TREES AND 23 SHRUBS
DECKER STREET	200 FEET / 30 = 7 TREES AND 10 SHRUBS
PROVIDED:	
THOMPSON DRIVE	15 TREES AND 23 SHRUBS
DECKER STREET	7 TREES AND 10 SHRUBS

REQUIRED: 1 TREE AND 2 SHRUBS PER 5,000 SQUARE FEET OF TOTAL LOT AREA EXCLUDING BUILDING FOOTPRINT AREA
 $92,667 \text{ SF} - 24,000 \text{ SF} = 68,667 \text{ SF} / 5,000 = 14 \text{ TREES AND } 27 \text{ SHRUBS}$
 PROVIDED: 14 TREES AND 27 SHRUBS

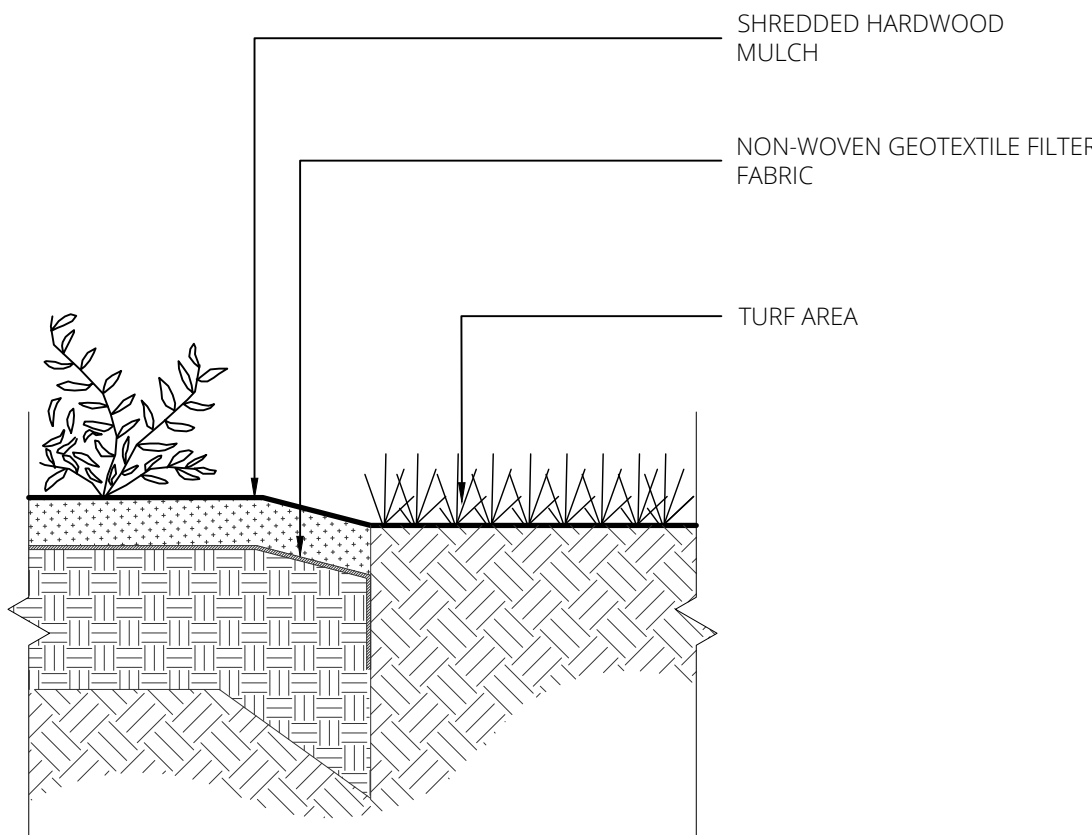
1. GROUND MOUNTED EQUIPMENT SHALL BE TOTALLY SCREENED FROM VIEW BY EVERGREENS AS SHOWN ON PLAN BELOW.

<u>SYMBOL</u>	<u>CODE</u>	<u>QTY</u>	<u>COMMON / BOTANICAL NAME</u>	<u>CONT</u>	<u>CAL</u>
<u>DECIDUOUS TREES</u>					
	AS2	15	SUGAR CONE SUGAR MAPLE / ACER SACCHARUM 'SUGAR CONE'	B & B	3" CAL
	QC	6	CRIMSON SPIRE™ OAK / QUERCUS ROBUR X ALBA 'CRIMSCHMIDT'	B & B	3" CAL
	UE	8	ALLEE LACEBARK ELM / ULMUS PARVIFOLIA 'EMER II'™	B & B	3" CAL
<u>ORNAMENTAL TREE</u>					
	CK	7	KOUSA DOGWOOD / CORNUS KOUSA	B & B	3" CAL
<u>SHRUBS</u>					
	AB	23	LOW SCAPE HEDGER BLACK CHOKEBERRY / ARONIA MELANOCARPA 'UCONNAM166'™	2 GAL	
	JP	32	SEA GREEN JUNIPER / JUNIPERUS X PFITZERIANA 'SEA GREEN'	5 GAL	
	ND	22	FIREPOWER DWARF NANDINA / NANDINA DOMESTICA 'FIREPOWER'	2 GAL	
	TM	29	DENSIFORMIS YEW / TAXUS X MEDIA 'DENSIFORMUS'	5 GAL	
<u>GROUND COVERS</u>					
	TTF	16,900 SF	TURF TYPE TALL FESCUE / DROUGHT TOLERANT FESCUE BLEND	SOD	



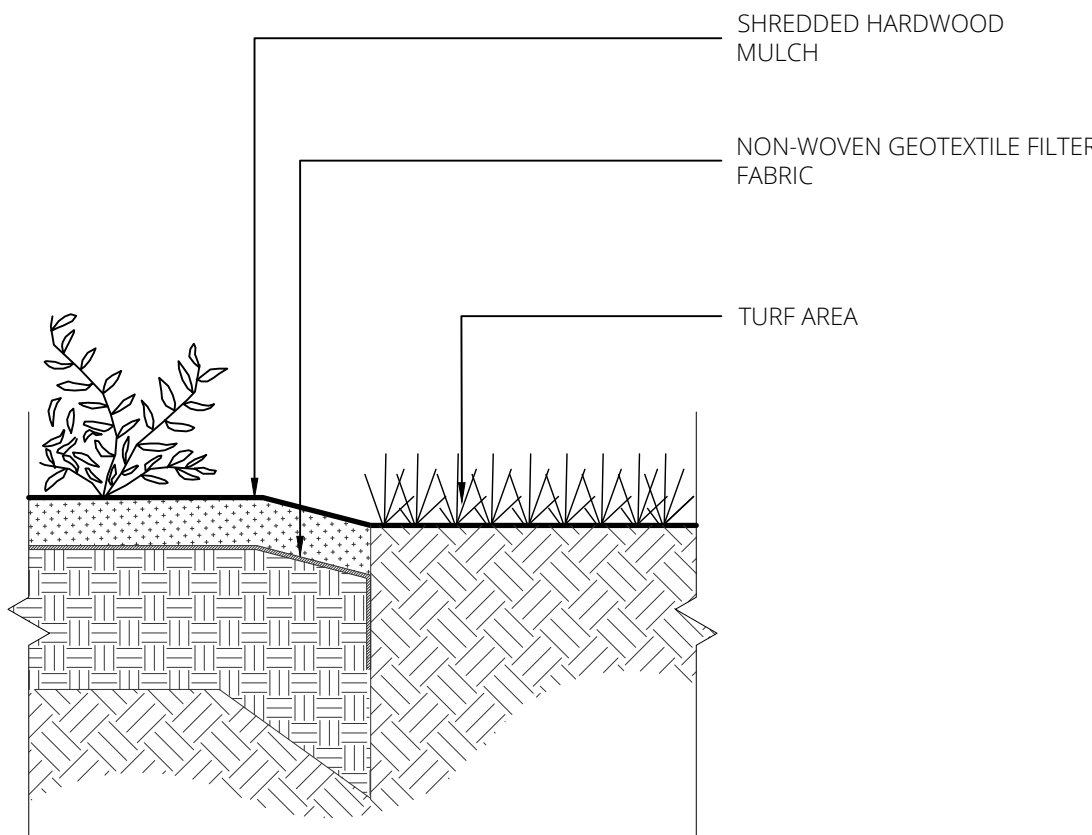


SCALE = 1/4" = 1'-0"



SCALE = 1/2" = 1'-0"

SCALE = 1/2" = 1'-0"



SCALE = 1" = 1'-0"

GENERAL

- ## PLANTING PREPARATION

PLANTING MATERIALS

- ## PLANTING SOIL MIX

- A MIX OF EXISTING SOIL, TOPSOIL, AND COMPOST IN THE FOLLOWING RATIO:

MIX COMPONENT	% BY MOIST VOLUME
EXISTING SOIL	65-70%
TOPSOIL (UNSCREENED)	25-30%
COMPOST	5%

16. COMPOST: BLENDED AND GROUND LEAF, WOOD AND OTHER PLANT-BASED MATERIAL. COMPOSTED FOR A MINIMUM OF 9 MONTHS AND AT TEMPERATURES ENOUGH TO BREAK DOWN ALL WOODY FIBERS, SEEDS AND LEAF STRUCTURES, FREE OF TOXIC MATERIAL AT LEVELS THAT ARE HARMFUL TO PLANTS OR HUMANS. SOURCE MATERIAL SHALL BE YARD WASTE TRIMMINGS BLENDED WITH OTHER PLANT OR MANURE-BASED MATERIAL DESIGNED TO PRODUCE COMPOST HIGH IN FUNGAL MATERIAL. COMPOST SHALL BE COMMERCIALY PREPARED COMPOST AND MEET US COMPOST COUNCIL STATE/MEXICO CRITERIA OR AS MODIFIED IN THIS SECTION FOR "COMPOST AS A LANDSCAPE BACKFILL MISC COMPONENT".

- a. COMPOST SHALL COMPLY WITH THE FOLLOWING PARAMETERS:
 - a.a. PH: 5.5 - 8.0.
 - a.b. SOIL SALT (ELECTRICAL CONDUCTIVITY): MAXIMUM 5 DS/M (MMHOS/CM).
 - a.c. MOISTURE CONTENT %, WET WEIGHT BASIS: 30 - 60.
 - a.d. PARTICLE SIZE, DRY WEIGHT BASIS: 98% PASS THROUGH 3/4 INCH SCREEN OR SMEAR.
 - a.e. STABILITY CARBON DIOXIDE EVOLUTION RATE: $\text{MG CO}_2\text{/C/G OM/ DAY} < 2$.
 - a.f. SOLVITA MATURITY TEST: >6.
 - a.g. PHYSICAL CONTAMINANTS (INERTS), %, DRY WEIGHT BASIS: <1%.
 - a.h. CHEMICAL CONTAMINANTS, MG/KG (PPM): MEET OR EXCEED US EPA CLASS A STANDARD, 40CFR 5.503.13, TABLES 1 AND 3 LEVELS.
 - a.i. BIOLOGICAL CONTAMINANTS SELECT PATHOGENS FECAL COLIFORM BACTERIA, OF SALMONELLA, MEET OR EXCEED US EPA CLASS A STANDARD, 40 CFR 5.503.32(A) LEVEL REQUIREMENTS.
- 17. PROVIDE A ONE QUART SAMPLE WITH MANUFACTURER'S LITERATURE AND MATERIAL CERTIFICATION THAT THE PRODUCT MEETS THE REQUIREMENTS.
- 18. INORGANIC SOIL AMENDMENTS
 - a. LIME: ASTM C 602, AGRICULTURAL LIMING MATERIAL CONTAINING A MINIMUM OF 80 PERCENT CALCIUM CARBONATE EQUIVALENT AND AS FOLLOWS:
 - a.a. CLASS 1, WITH A MINIMUM OF 99 PERCENT PASSING THROUGH A NO. 8 SIEVE AND A MINIMUM OF 75 PERCENT PASSING THROUGH A NO. 60 SIEVE.
 - a.b. FORM: PROVIDE LIME IN FORM OF GROUND DOLOMITIC LIMESTONE.

23. SHOULD SUBSURFACE DRAINAGE OR SOIL CONDITIONS BE ENCOUNTERED WHICH WOULD BE DETRIMENTAL TO GROWTH OR SURVIVAL OF PLANT MATERIAL, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IN WRITING, STATING THE CONDITIONS AND SUBMIT A PROPOSAL COVERING COST OF CORRECTIONS. IF THE CONTRACTOR FAILS TO NOTIFY THE OWNER'S REPRESENTATIVE OF SUCH CONDITIONS, THEY SHALL REMAIN RESPONSIBLE FOR PLANT MATERIAL UNDER THE WARRANTY CLAUSE OF THE SPECIFICATIONS.

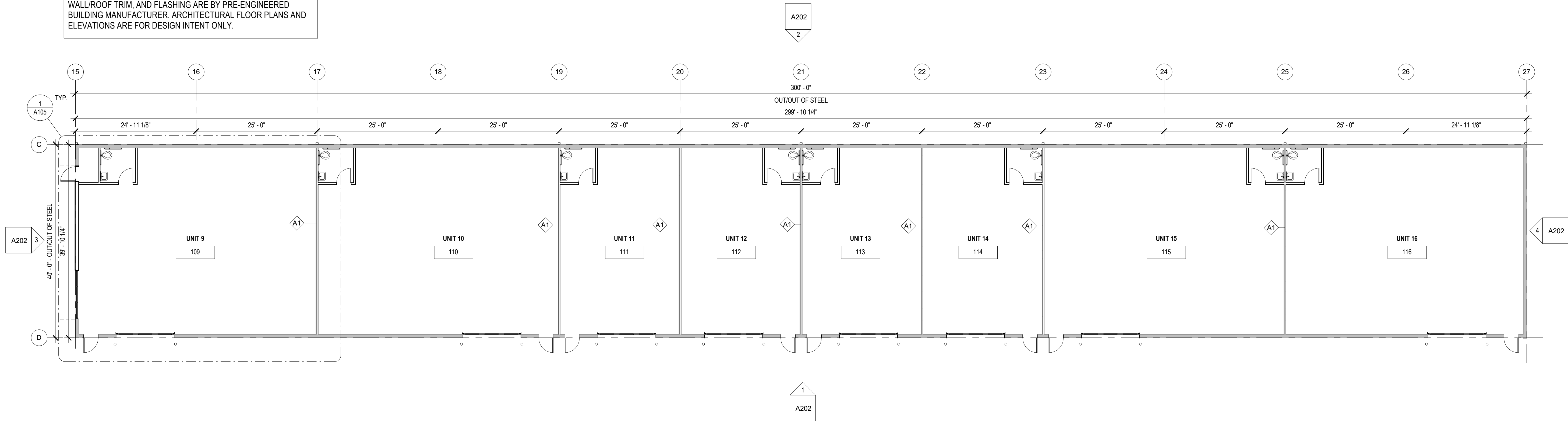
24. DELIVERY, STORAGE, AND HANDLING
- a. WEATHER: DO NOT MIX, DELIVER, PLACE OR GRADE SOILS WHEN FROZEN OR WITH MOISTURE ABOVE FIELD CAPACITY.
 - b. PROTECT SOIL AND SOIL STOCKPILES, INCLUDING THE STOCKPILES AT THE SOIL BLENDER'S YARD, FROM WIND, RAIN AND WASHING THAT CAN ERODE SOIL OR SEPARATE FINES AND COARSE MATERIAL, AND CONTAMINATION BY CHEMICALS, DUST AND DEBRIS THAT MAY BE DETRIMENTAL TO PLANTS OR SOIL DRAINAGE. COVER STOCKPILES WITH PLASTIC SHEETING OR FABRIC AT THE END OF EACH WORKDAY.
 - c. ALL MANUFACTURED PACKAGED PRODUCTS AND MATERIAL SHALL BE DELIVERED TO THE SITE IN UNOPENED CONTAINERS AND STORED IN A DRY CLOSED SPACE SUITABLE FOR THE MATERIAL AND MEETING ALL ENVIRONMENTAL REGULATIONS. BIOLOGICAL ADDITIVES SHALL BE PROTECTED FROM EXTREME COLD AND HEAT. ALL PRODUCTS SHALL BE FRESHLY MANUFACTURED AND DATED FOR THE YEAR IN WHICH THE PRODUCTS ARE TO BE USED.
 - d. DELIVER ALL CHEMICAL AMENDMENTS IN ORIGINAL, UNOPENED CONTAINERS WITH ORIGINAL LABELS INTACT AND LEGIBLE, WHICH STATE THE GUARANTEED CHEMICAL ANALYSIS. STORE ALL CHEMICALS IN A WEATHER PROTECTED ENCLOSURE.

RELATED ITEMS

25. EDGING: ALL PLANT BEDS AND TURF AREAS MUST BE SEPARATED WITH A CULTIVATED EDGE, AS SHOWN IN THE DETAIL ON THIS SHEET.
26. MULCH: APPLY A 3" LAYER OF SHREDDED HARDWOOD BARK MULCH IN PLANTING BEDS, AND AROUND TREES. MULCH SHALL CONSIST OF PURE WOOD, BROWN IN COLOR AND BE FREE OF ALL FOREIGN SUBSTANCES. PROVIDE AND INSTALL PRE-EMERGENT HERBICIDE PRIOR TO MULCH INSTALLATION PER MANUFACTURERS INSTRUCTIONS.
27. TREE TIES: CONTRACTOR SHALL USE AN APPROVED TREE TIE SYSTEM, TREE GUYING TO BE FLAT WOVEN POLYPROPYLENE MATERIAL, 3/4-INCH-WIDE, WITH A TENSILE STRENGTH OF 900 LBS. HOSE AND WIRE WILL NOT BE ACCEPTED. SUBJECT TO COMPLIANCE WITH THESE REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING PRODUCTS, OR APPROVED EQUAL:

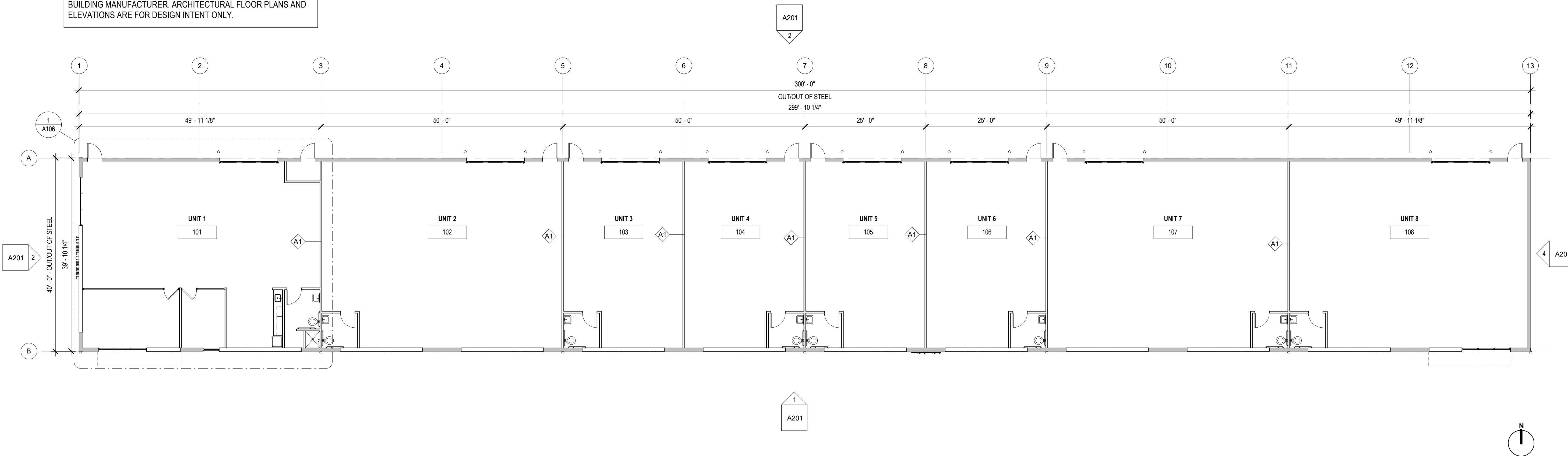
- "ABORTIVE GREEN" MANUFACTURED BY DEEP ROOT PARTNERS, LP
"LEONARD TREE THE WEPPING GREEN" MANUFACTURED BY A.M. LEONARD, INC.
MAINTENANCE AND CLEAN-UP
28. THE CONTRACTOR SHALL PROVIDE ALL WATER, WATERING DEVICES AND LABOR NECESSARY TO IRRIGATE PLANT MATERIALS UNTIL PROVISIONAL ACCEPTANCE OF THE PROJECT. THE CONTRACTOR SHALL SUPPLY ENOUGH WATER TO MAINTAIN THE PLANT'S HEALTHY CONDITION.
29. REMOVE ALL RUBBISH, EQUIPMENT, AND MATERIAL AND LEAVE THE AREA IN A NEAT, CLEAN CONDITION EACH DAY. MAINTAIN PAVED AREAS UTILIZED FOR HAULING EQUIPMENT AND MATERIALS BY OTHER TRADES IN A CLEAN AND UNOBSTRUCTED CONDITION AT ALL TIMES. REMOVE SOIL OR DIRT THAT ACCUMULATES DUE TO PLANTING OPERATIONS EACH DAY.
- INSPECTION, WARRANTIES AND GUARANTEE
30. AT THE COMPLETION OF PLANTING OPERATIONS, ALL PLANTS SHALL BE INSPECTED BY A LICENSED LANDSCAPE ARCHITECT TO VERIFY THAT ALL LANDSCAPING HAS BEEN INSTALLED IN ACCORDANCE WITH THE APPROVED PLANTING PLAN AND IS IN A HEALTHY CONDITION. CONTRACTOR SHALL REPLACE IMMEDIATELY ANY PLANTS NOT IN HEALTHY AND VIGOROUS CONDITION AT THAT TIME AT NO EXPENSE TO THE OWNER. ONCE IT CAN BE VERIFIED THAT ALL PLANTINGS CONFORM TO THE APPROVED PLAN AND ARE FOUND TO BE HEALTHY, THE LANDSCAPE ARCHITECT SHALL PREPARE AN AFFIDAVIT TESTIFYING TO THESE FACTS AND THE OWNER SHALL SUBMIT IT TO CITY STAFF.
31. OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT AT ANY TIME OR PLACE PRIOR TO FINAL ACCEPTANCE OF WORK, ANY AND ALL PLANTS WHICH, IN THEIR OPINION, FAIL TO MEET THESE SPECIFICATION REQUIREMENTS.
32. CONTRACTOR SHALL GUARANTEE TREES, SHRUBS, PERENNIALS AND TURF FOR ONE CALENDAR YEAR FOLLOWING PROVISIONAL ACCEPTANCE OF THE OVERALL PROJECT. DURING THE GUARANTEE PERIOD, PLANTS THAT DIE DUE TO NATURAL CAUSES OR THAT ARE UNHEALTHY OR UNSIGHTLY IN CONDITION, SHALL BE REPLACED BY THE CONTRACTOR. PLANTS USED FOR THE REPLACEMENT SHALL BE OF THE SAME VARIETY AND SIZE AS ORIGINALLY SPECIFIED IN THE PLANT SCHEDULE. REPLACEMENTS SHALL BE MADE WITHIN ONE WEEK OF REQUESTED TIME PERIOD. FAVORABLE SEASONAL PLANTING CONDITIONS; GUARANTEE WILL NOT BE ENFORCED IF THE FOLLOWING OCCUR: PLANTS DIE DUE TO VANDALISM, OVER OR UNDER WATERING BY THE OWNER, IMPROPER MAINTENANCE PROCEDURES CARRIED OUT BY THE OWNER INVOLVING LAWN MOWER DAMAGE, OVER FERTILIZATION, ACTS NOT RELATED TO CONTRACTUAL RESPONSIBILITIES OF CONTRACTOR OR SIMILAR CIRCUMSTANCES BEYOND THE CONTROL OF THE CONTRACTOR.

NOTE: BUILDING ENCLOSURE INCLUDING STRUCTURAL FRAME, EXTERIOR WALLS, ROOF, INSULATION, GUTTERS, DOWNSPOUTS, WALL/ROOF TRIM, AND FLASHING ARE BY PRE-ENGINEERED BUILDING MANUFACTURER. ARCHITECTURAL FLOOR PLANS AND ELEVATIONS ARE FOR DESIGN INTENT ONLY.



2 FLOOR PLAN - BUILDING B
3/32\" = 1'-0"

NOTE: BUILDING ENCLOSURE INCLUDING STRUCTURAL FRAME, EXTERIOR WALLS, ROOF, INSULATION, GUTTERS, DOWNSPOUTS, WALL/ROOF TRIM, AND FLASHING ARE BY PRE-ENGINEERED BUILDING MANUFACTURER. ARCHITECTURAL FLOOR PLANS AND ELEVATIONS ARE FOR DESIGN INTENT ONLY.



1 FLOOR PLAN - BUILDING A
3/32\" = 1'-0"

LEE'S SUMMIT FLEX
SPACES

604 E. TOWNSHIP RD.
Lee's Summit, MO 64082

PROJECT NUMBER: 23082

CLIENT:
Capital Builders

FINAL DEVELOPMENT
PLAN

02.22.2024

Architect:
License:

REV.	DATE	ISSUE

ARCHITECT:

six
twenty
one

SixTwentyOne
1705 SUMMIT ST.
KANSAS CITY, MO 64108
T: 816.694.1369
www.sixtwentyone.com

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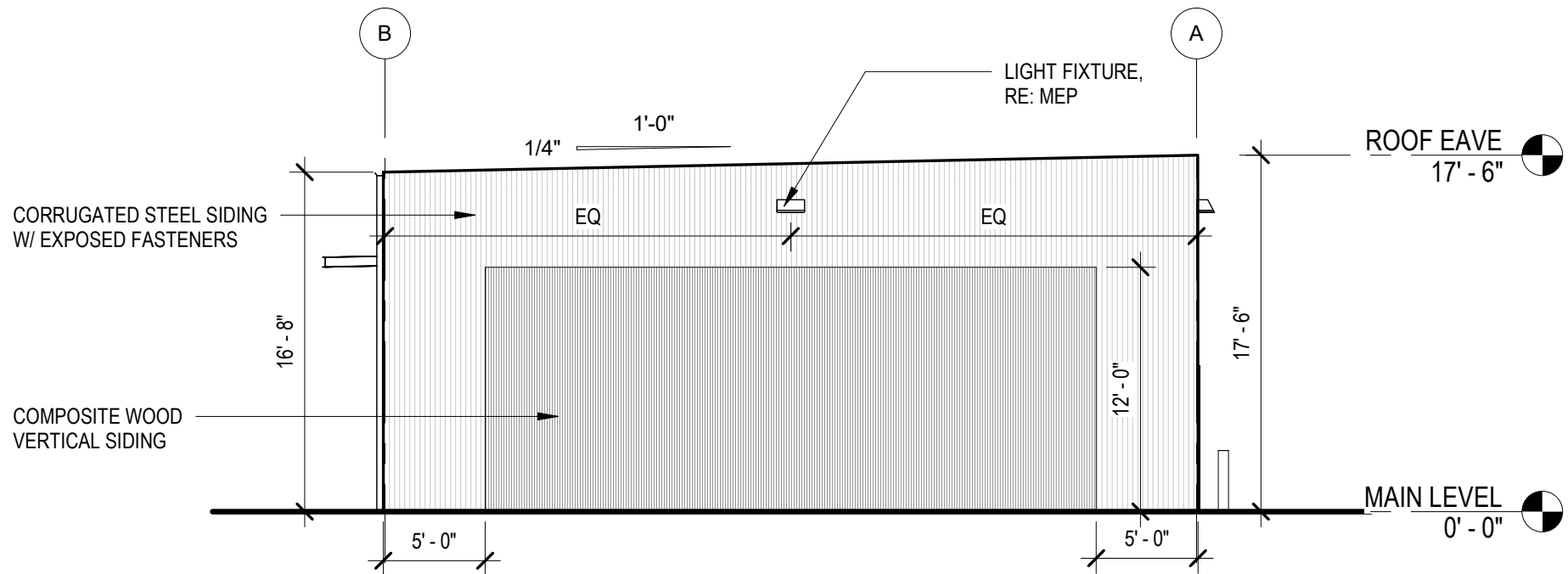
This drawing may be part of an integrated set of Construction Documents, including the Contract, the Conditions and the Specifications. The Contract Documents are complementary: what is required by one is as binding as if required by all. Application of a material or equipment item to Work installed by others constitutes acceptance of that Work. Calculate and measure dimensions - DO NOT SCALE DRAWINGS unless directed by the Architect to do so. Dimensions indicated are to the face of a material, unless noted otherwise.

FLOOR PLANS

Sheet Revision no.

A101

- CORRUGATED STEEL SIDING: MBCI, PBC METAL WALL PANEL, MIDNIGHT BRONZE
- COMPOSITE WOOD SIDING: NEWTECH WOOD, EUROPEAN SIDING, NORWEGIAN BOARD, PERUVIAN TEAK
- STEEL TRIM



4 ELEVATION - BUILDING A (EAST)
1/8" = 1'-0"

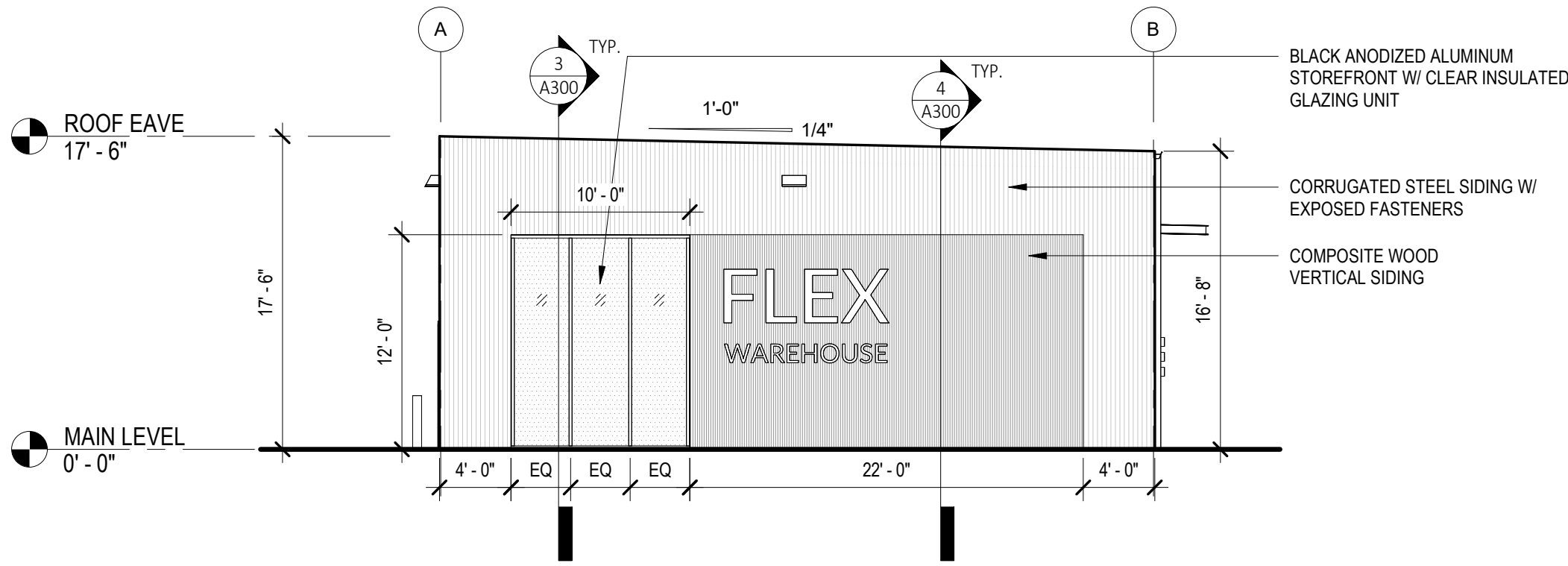
TOTAL WALL AREA: 683 SF

- CORRUGATED STEEL SIDING

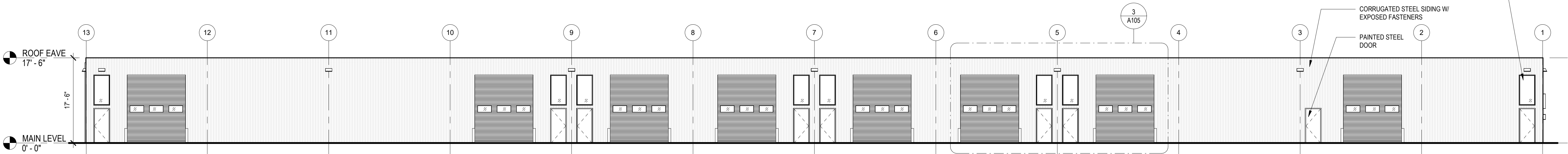
299 SF (44%)
- COMPOSITE WOOD SIDING

264 SF (39%)
- STOREFRONT GLASS

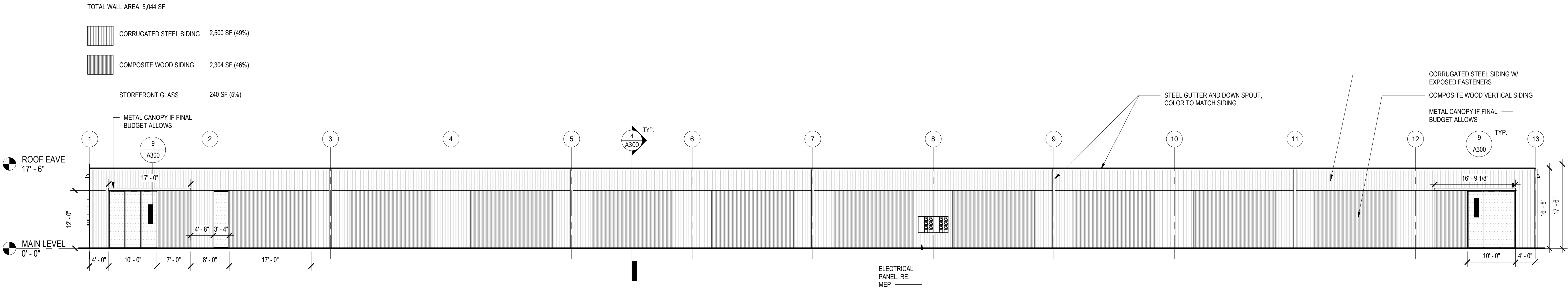
120 SF (17%)



3 ELEVATION - BUILDING A (WEST)
1/8" = 1'-0"



2 ELEVATION - BUILDING A (NORTH)
3/32" = 1'-0"



1 ELEVATION - BUILDING A (SOUTH)
3/32" = 1'-0"

LEE'S SUMMIT FLEX
SPACES

604 E. TRINITY RD.
LEE'S SUMMIT, MO 64082

PROJECT NUMBER: 23082

CLIENT:
Capital Builders

FINAL DEVELOPMENT
PLAN

02.22.2024

Architect -
Location -

REV.	DATE	ISSUE

ARCHITECT:

six
twenty
one

SixTwentyOne
1705 SUMMIT ST.
KANSAS CITY, MO 64108
T: 816.694.1369
www.sixtwentyone.com

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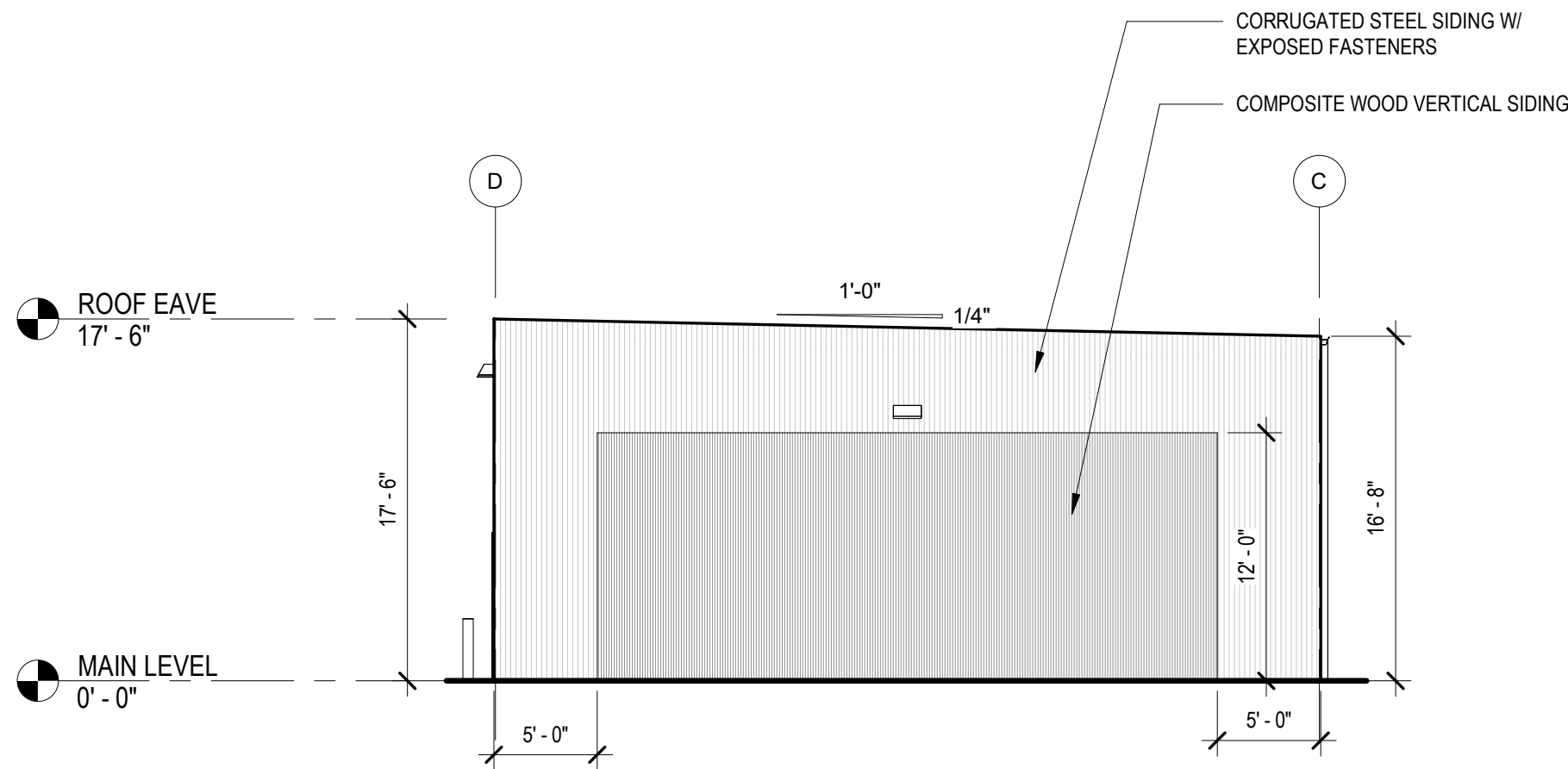
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ELEVATIONS - BUILDING A

Sheet Revision no.

A201

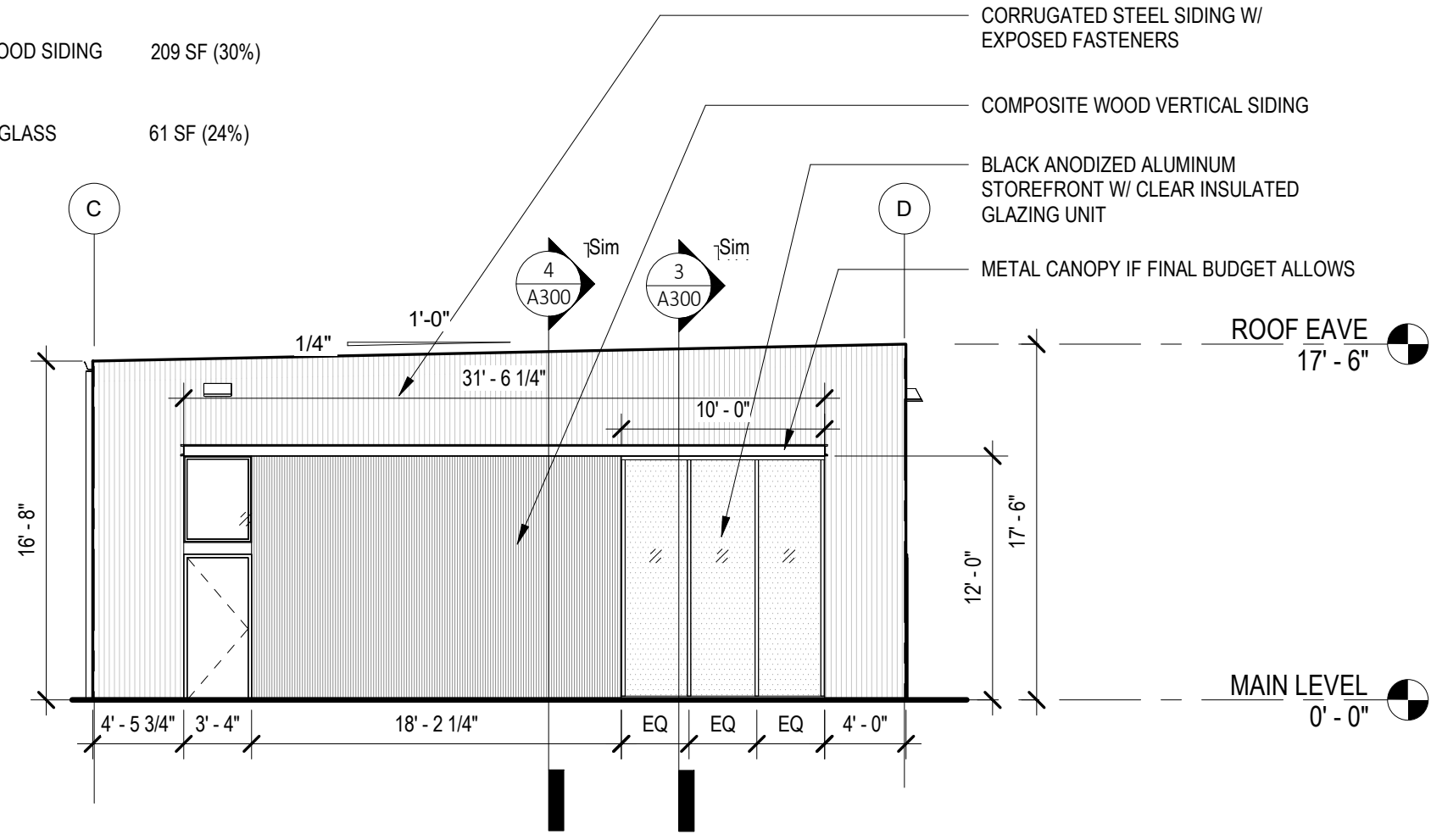
- CORRUGATED STEEL SIDING: MBCI, PBC METAL WALL PANEL, MIDNIGHT BRONZE
- COMPOSITE WOOD SIDING: NEWTECH WOOD, EUROPEAN SIDING, NORWEGIAN BOARD, PERUVIAN TEAK
- STEEL TRIM



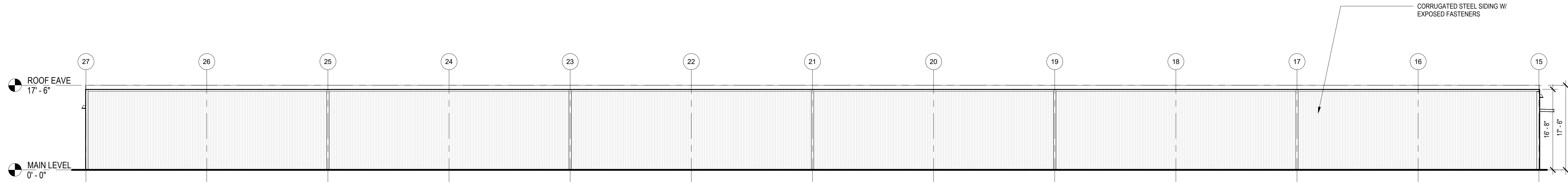
4 ELEVATION - BUILDING B (EAST)
1/8" = 1'-0"

TOTAL WALL AREA: 683 SF

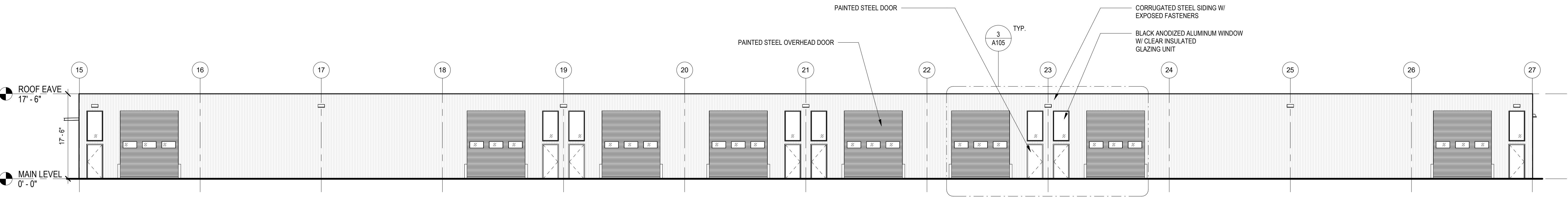
- CORRUGATED STEEL SIDING 314 SF (46%)
- COMPOSITE WOOD SIDING 209 SF (30%)
- STOREFRONT GLASS 61 SF (24%)



3 ELEVATION - BUILDING B (WEST)
1/8" = 1'-0"



2 ELEVATION - BUILDING B (NORTH)
3/32" = 1'-0"



1 ELEVATION - BUILDING B (SOUTH)
3/32" = 1'-0"

LEE'S SUMMIT FLEX
SPACES
804 E. Truman Blvd.
Lee's Summit, MO 64082

PROJECT NUMBER: 23082

CLIENT:
Capital Builders

FINAL DEVELOPMENT
PLAN

02.22.2024

Architect -
License -

REV.	DATE	ISSUE

ARCHITECT:

six
twenty
one

SixTwentyOne
1705 SUMMIT ST.
KANSAS CITY, MO 64108
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ELEVATIONS - BUILDING B

Sheet

Revision no.

A202



BUILDING A - WEST AND SOUTH ELEVATIONS



BUILDING A - EAST AND NORTH ELEVATIONS



BUILDING B - WEST AND SOUTH ELEVATIONS



BUILDING B - SOUTH AND EAST ELEVATIONS

LEE'S SUMMIT FLEX
SPACES
804 E. Truman Blvd.
Lee's Summit, MO 64082

PROJECT NUMBER: 23092

CLIENT:
Capital Builders

FINAL DEVELOPMENT
PLAN

02.22.2024

Architect:
SixTwentyOne

REV.	DATE	ISSUE

ARCHITECT:

six
twenty
one

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1705 SUMMIT ST.
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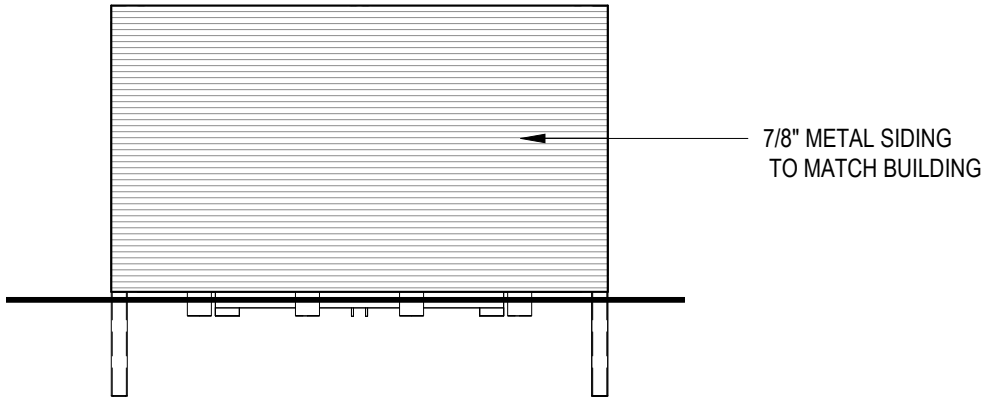
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RENDERINGS

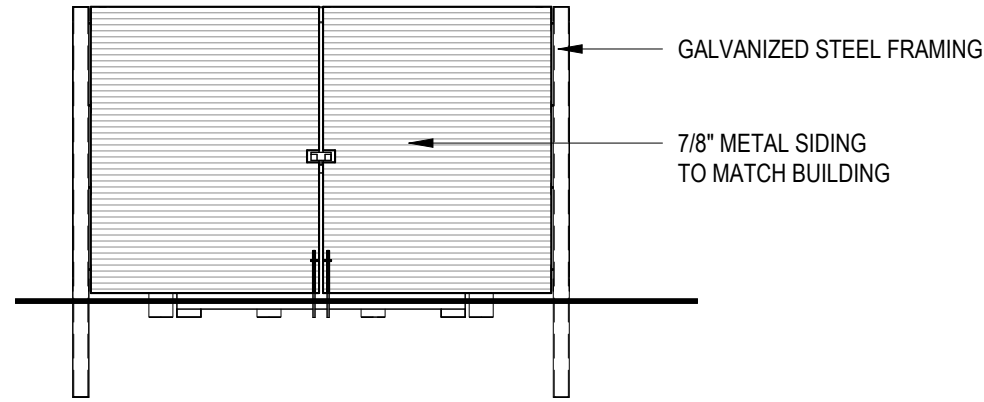
Sheet	Revision no.
A203	

Printed: 1/31/2024 2:41:08 PM

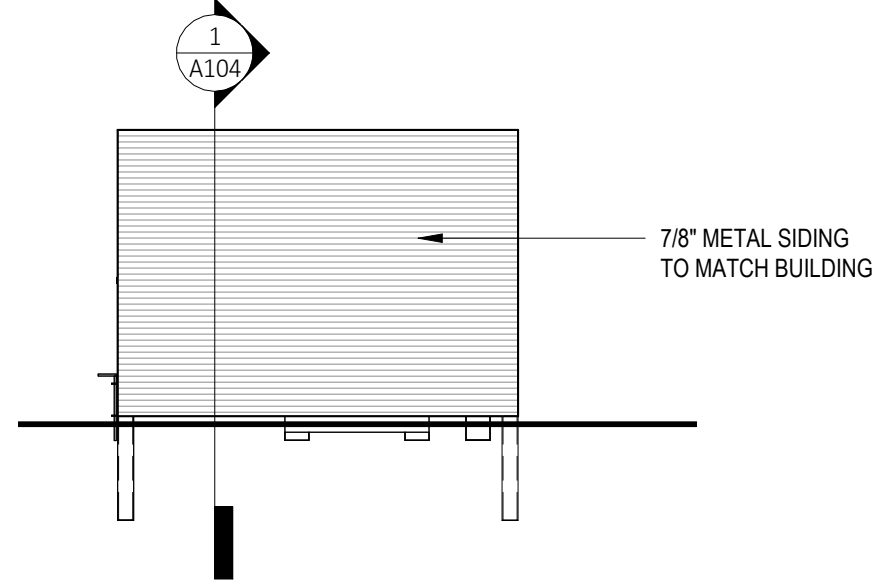
5 ELEVATION - TRASH ENCLOSURE - NORTH
 1/4" = 1'-0"



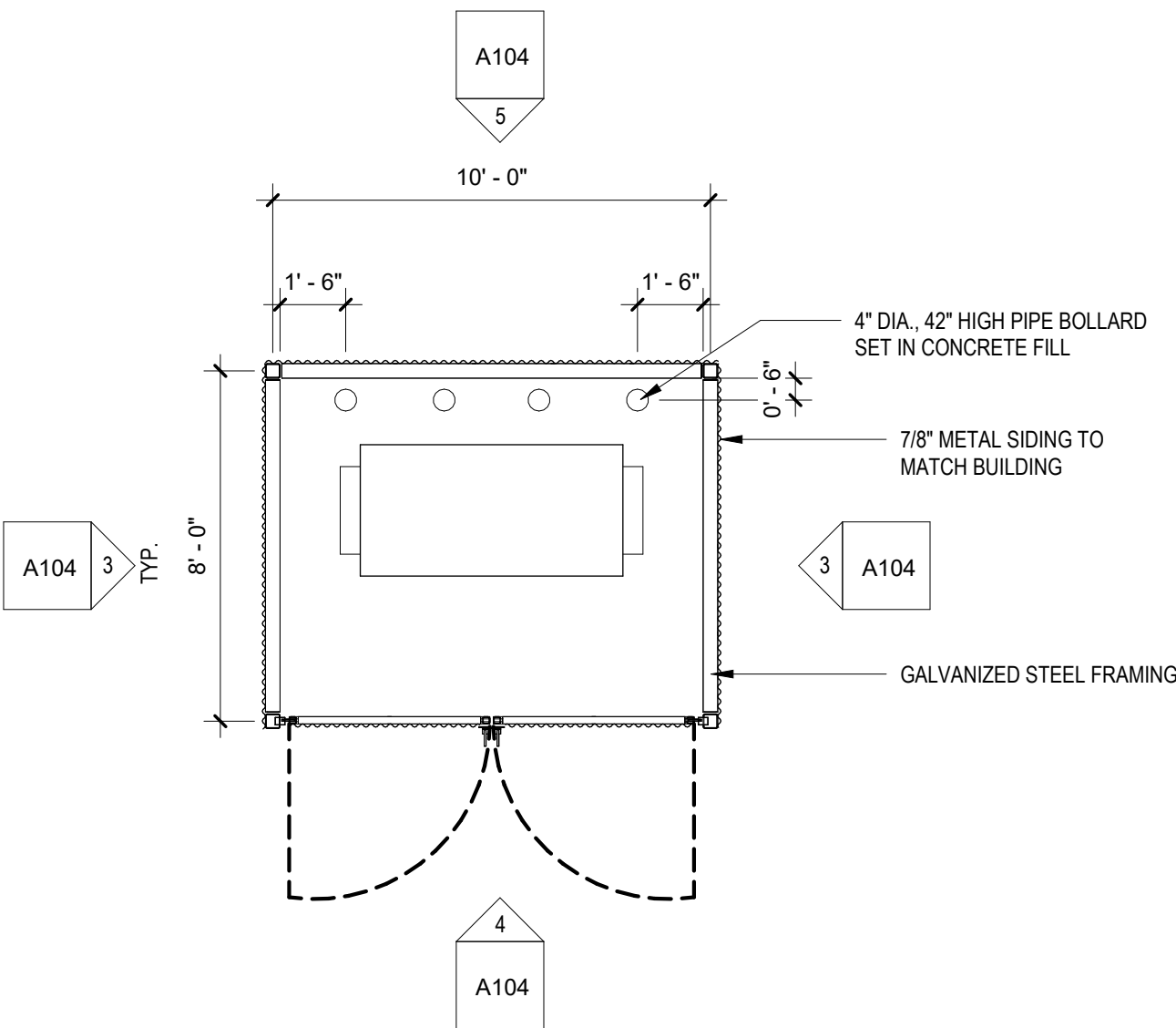
4 ELEVATION - TRASH ENCLOSURE - SOUTH
 1/4" = 1'-0"



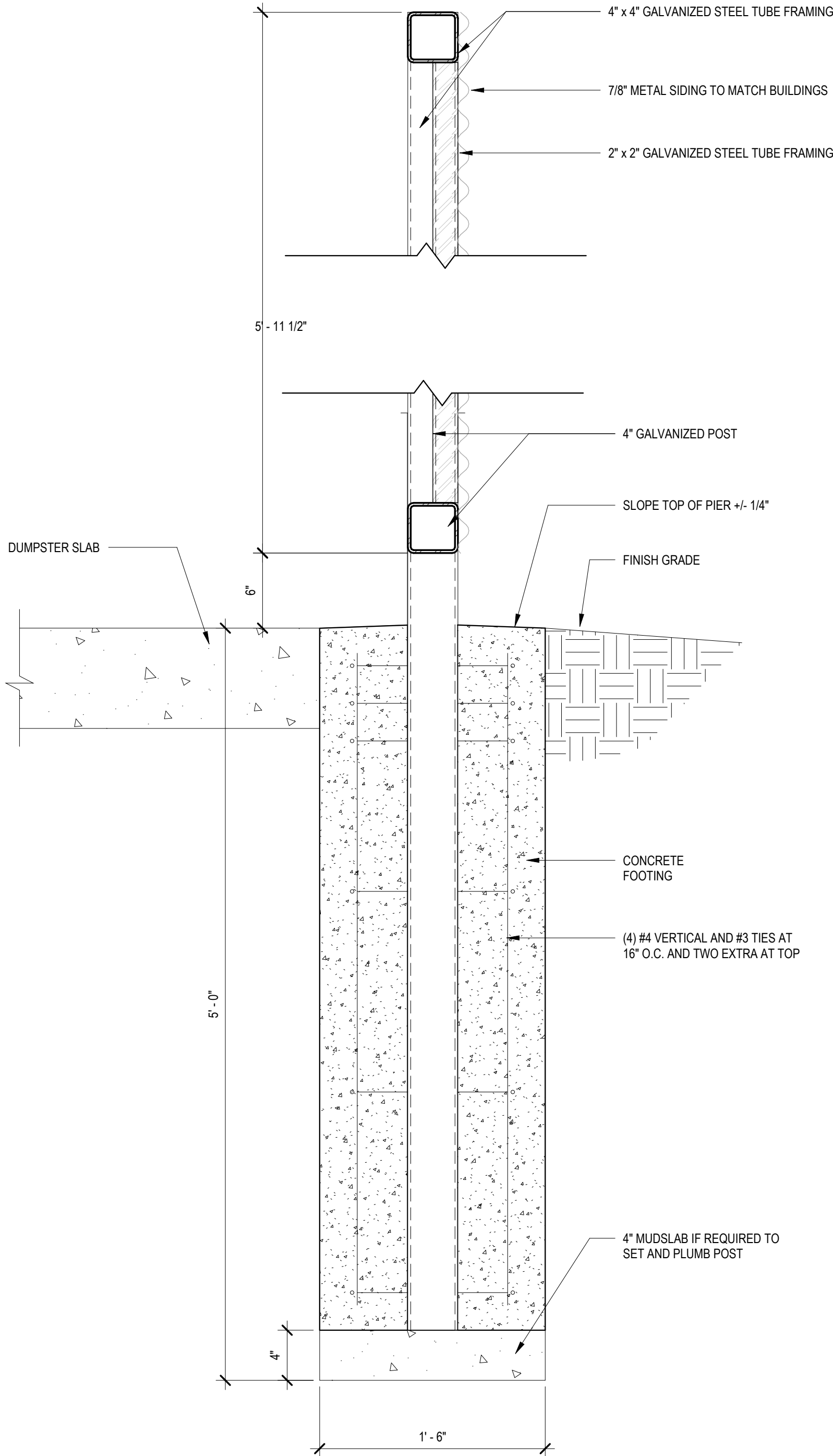
3 ELEVATION - TRASH ENCLOSURE - EAST/WEST
 1/4" = 1'-0"



2 FLOOR PLAN - TRASH ENCLOSURE
 1/4" = 1'-0"



1 SECTION DETAIL - DUMPSTER ENCLOSURE
 1 1/2" = 1'-0"



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TRASH ENCLOSURE PLAN & DETAILS

Sheet

Revision no.

A204

FINAL DEVELOPMENT
 PLAN

REV.	DATE	ISSUE

ARCHITECT:

six
 twenty
 one

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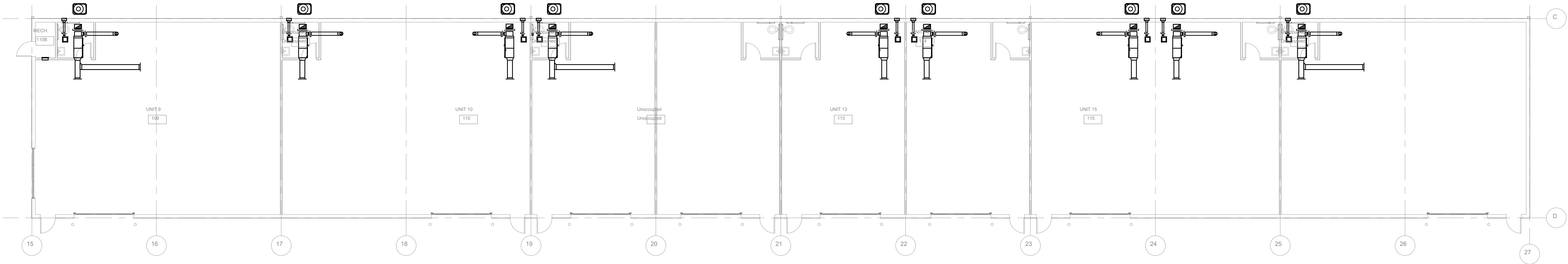
02.22.2024

Architect:
 License:

LEE'S SUMMIT FLEX
 SPACES
 6000 Lee's Summit Blvd.
 Lee's Summit, MO 64082

PROJECT NUMBER: 23092

client:
 Capital Builders



2

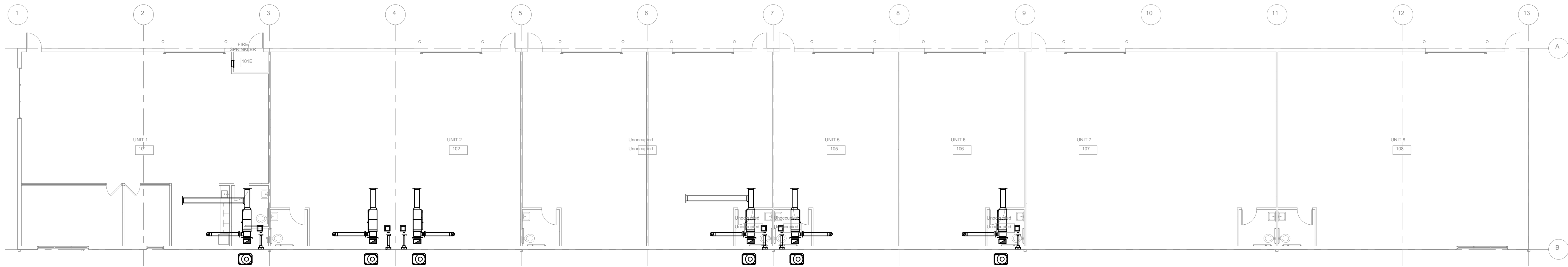
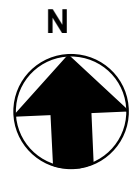
MECHANICAL FLOOR PLAN - BUILDING B

SCALE: 3/32" = 1'-0"

GENERAL NOTES

1. REPLACE THIS NOTE WITH YOUR SHEET SPECIFIC GENERAL NOTES KEEPING THE SAME FORMAT, WIDTH AND POSITION. DELETE THIS NOTE AND TITLE IF YOU DO NOT HAVE ANY NOTES.

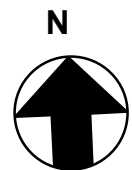
KEYED NOTES



1

MECHANICAL FLOOR PLAN - BUILDING A

SCALE: 3/32" = 1'-0"



FLEX SPACES

60 SE Thompson Dr.
Lees Summit, MO 64082
PROJECT NUMBER:
CLIENT:
Capital Builders

CONSTRUCTION / PERMIT DRAWINGS

08.28.2023

REV.	DATE	ISSUE

ARCHITECT:

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twenty
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GARVER
4711 Northside Dr. North Little Rock, AR 72116
501-776-3000
www.garverusa.com

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MECHANICAL FLOOR PLANS

Sheet: Revision No:

M101

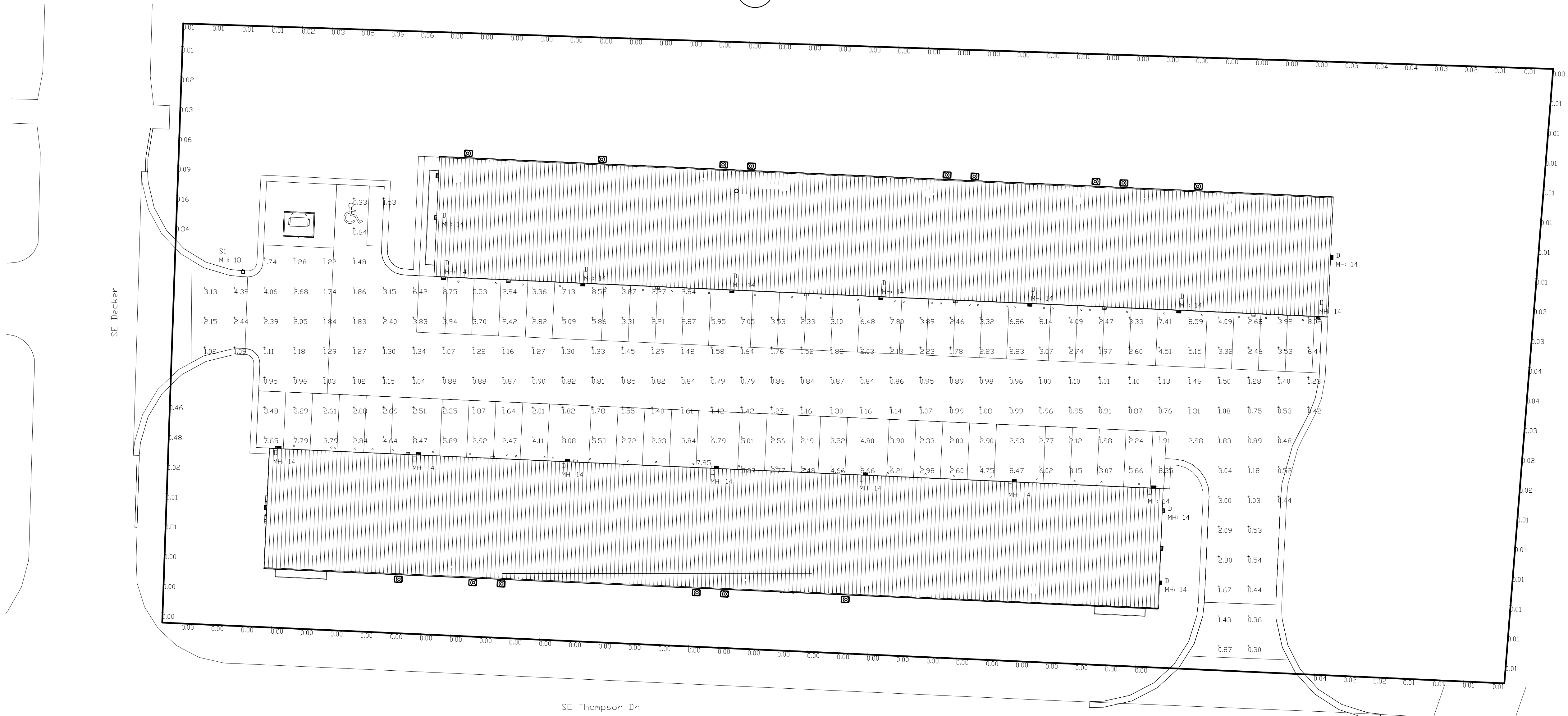
(3)

CALCULATION SUMMARY & LUMINAIRE SCHEDULE

SCALE: N/A

Luminaire Schedule				
Tag	Description	LLF	Luminaire Lumens	Luminaire Watts
SI	VAI-L83-730-T3-F-S-xxx-DIM-UV_	0.900	7870	67
D	VWPX-L60-730-T3-xxx-CGL-DIM-UNV	0.900	6147	49

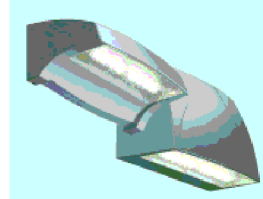
Calculation Summary						
Label	Units	Avg	Max	Min	Avg/Min	Max/Min
Parking_Lot	Fc	2.67	8.75	0.30	8.90	29.17
Property_Line	Fc	0.02	0.48	0.00	N.A.	N.A.



1 SITE PHOTOMETRIC PLAN

SCALE: 1" = 20'-0"

VWP LED
Voltaire Architectural Wall Pack



FEATURE

- Designed to illuminate sidewalks, entryways, perimeter or facades
- Intended for use in both upright and downward applications
- Optional tamper-resistant screws for vandal-prone areas
- Blends seamlessly with a variety of architectural styles
- Purposefully modeled to allow runoff of dirt and water for an always-clean appearance
- Precision optics provide multiple distribution options
- Wireless in-fixture control solutions available
- Made Right Here® in the USA

ORDERING EXAM

ORDERING INFO				
SERIES	LUMENS ⁽¹⁾	CRI	CCT	DISTRIBUTION ⁽²⁾
VWVFH Horizontal	130 3,000lm	7 70	30 3000K	T2 Type II
VWVFV Vertical	160 4,000lm	8 80	40 4000K	T3 Type II
	185 8,500lm ⁽³⁾		90 5000K	TFT Type forward throw

FINISH OPTIONS ⁽¹⁾		SHIELDING		OPTIONS ⁽²⁾	
BLK	Black (RAL #9004)	CGL	Clear tempered glass lens	EM/ENH	4-watt integral emergency battery ⁽⁴⁾
DBZ	Dark bronze			EM/10WC	10-watt emergency, low temperature battery ⁽⁴⁾
DBR	Dark bronze	SDGL	Micro-prismatic tempered glass lens	EM/10CEC	10-watt emergency CEC qualified battery ⁽⁴⁾
GRAY	Standard gray			SF	Single fuse ⁽³⁾
GRN	Green (RAL #9005)			DF	Double fuse ⁽³⁾
SLV	Satin aluminum (RAL #9006)			PC	Factory-installed button-style pushcontrol
WHT	White (RAL #9002)			HSGX	Energy-hungry extension used to match units

TP Lamper-resistant Tera head screws ⁽³²⁾

CONDUIT ENTRY ⁽³³⁾

CR Right side conduit entry

CL Left side conduit entry

CD Dual conduit entry

CTOP Top conduit entry ⁽³⁴⁾

CONTROL	DRIVER	VOLTAGE
See page 4 for ADDITIONAL CONTROL OPTIONS.	DIM Driver with external dimming wires prewired for 0-12V low voltage applications	120 120V 208 208V 240 240V
— None		277 277V
AVI-IFAC-0A	Avi-on wireless fixture control with outdoor antenna (116)	UNV 120-277V 347 347V (116)

ACCESSORIES

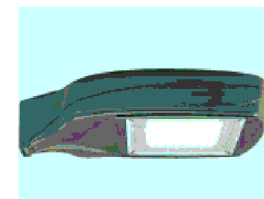
TPTX-25 TOOL Tamper-resistant tool for Torx head screws. (100)

NOTES

• **Letter output** 2
• **diff. analysis**

- [illegible]

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VA1 LED
Voltaire Architectural Area Light

- ### FEATURES
- Complement architecture with the low-profile, contoured design
 - Shorter installation time with the hinged two-piece enclosure
 - Engineered to sustain greater wind loads than traditional fixtures
 - Six mounting configurations and four distributions provide versatility

ORDERING EXAMPLE: WAT - L220-750 - T5 - F - S - DB2 - OPTIONS - DIM - UNV						
ORDERING INFO						
SERIES	LUMENS ⁽¹⁾	CRI	CCT	DISTRIBUTION	ORIENTATION	
WAT	L83 8,350lm	7 79	30 3000K	T2 Type I	F Forward	
	L110 11,000lm	8 80 ⁽²⁾	40 4000K	T3 Type III	L Left	
	L160 16,000lm		50 5000K	T4 Type IV	R Right	
	L220 22,000lm			T6 Type V		

MOUNTING CONFIGURATION		FINISH OPTIONS ⁽¹⁾	
S	Single	BLK	Black (RAL #9004)
D90	Double @ 90°	DBZ	Dark bronze
D180	Double @ 180°	DBR	Medium bronze
T90	Triple @ 90°	GRY	Standard gray
T120	Triple @ 120° (4)	GRN	Green (RAL #6005)
O20	Circle 200	GLV	Extra (RAL #6004)

OPTIONS ⁽²⁾		DRIVER	VOLTAGE
See page 4 for ADDITIONAL CONTROL OPTIONS.			
5F	Single fuse ⁽³⁾	DIM	Dimming driver prewired for 0-10V low voltage applications
		DAI	DAI dimming driver
			120 120V
			208 208V
			240 240V

PCR	Active locking photo detector receptacle	nighttime dimming profile	UNV
PCRS	5 Position (3 power, 2 dimming signal) locking photo control receptacle per NEMA C136-41	Example: DIMIND425/6436	200-277V
PCRT	7 Position (3 power, 4 dimming signal) locking photo control receptacle per NEMA C136-41		347 347V
		480 480V	
RSD	Round straight pole mount adapter Example: 3.5" Pole top diameter = RSD350	DRIVER OPTIONS:	
	Additional lower lumen packages available. ⁽³⁾ Example: 12,000 nocturnal lumens	_____JCL Constant lumen output. Suffix, used in conjunction with programmable driver above. Example: DIMDALJCLPCL	

VATMR_	----	Pole top lesion mount and round pole adapter ⁽¹⁴⁾
VAWM_	----	Wall mount accessory ⁽¹⁶⁾
BG_	----	Roosting prevention spikes ⁽¹⁸⁾

NOTES

- | | |
|--|---|
| <p>1. Launch output based on TO CRASHDOWN, CCT and 213 file</p> <p>Actual performance may vary 15% to 25% in this table</p> <p>2. TO CRASHDOWN CCT file, Additional hardware packages available</p> <p>3. Extended time limits may apply. Contact factory for availability</p> <p>4. See page 3 for TO CRASHDOWN OPTIONS</p> <p>5. Remove power only</p> <p>6. See page 3 for TO CRASHDOWN DETAILS</p> <p>7. 200V, 277V, or 347V only. Must specify voltage.</p> <p>8. 200V, 277V, or 480V only. Must specify voltage.</p> <p>9. TO CRASHDOWN may be shipped with shading cup.</p> | <p>1. Specify power plug diameter, minimum 25 to 30. Do not specify when using VALMOR front seal not necessary.</p> <p>2. Specify dimensions of mounting hole. Mounting options. Options must be specified with front seal height in table below.</p> <p>3. Must specify front seal, mounting configuration and finish. See page 3 for details.</p> <p>4. Must specify finish. See page 3 for ordering info.</p> <p>5. Must specify material. See page 3 for ordering info.</p> <p>6. Specify mounting hole. See page 3 for details.</p> <p>7. Specify mounting hole. See page 3 for details.</p> <p>8. Specify mounting hole. See page 3 for details.</p> <p>9. Specify mounting hole. See page 3 for details.</p> |
|--|---|

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2 LIGHTING FIXTURE SPECIFICATIONS

SCALE: N/A

GENERAL NOTES

1. THIS PHOTOMETRIC LAYOUT WAS PRODUCED IN ACCORDANCE WITH THE CITY OF LEE'S SUMMIT, MO UNIFIED DEVELOPMENT ORDINANCE ARTICLE 8, DIVISION I, SUBDIVISION 5 - "LIGHTING STANDARDS". ALL INSTALLATIONS RESULTING FROM THIS DEVELOPMENT PLAN SHALL BE COMPLETED ACCORDING TO THE REQUIREMENTS IN THE LEE'S SUMMIT, MO UNIFIED DEVELOPMENT ORDINANCE AND ANY APPLICABLE SUPPLEMENTS.

HAZARD CLASSIFICATION
LEGEND - NFPA 13

	LIGHT HAZARD DESIGN DENSITY: 0.10 GPM/S.F DESIGN AREA: 1,500 S.F. HYDRANT FLOW: 250 GPM CHARACTERISTICS: SPACES WITH LOW QUANTITY AND LOW COMBUSTIBILITY OF CONTENTS
	ORDINARY HAZARD 1: DESIGN DENSITY: 0.15 GPM/S.F DESIGN AREA: 1,500 S.F. HYDRANT FLOW: 250 GPM CHARACTERISTICS: SPACES WITH MODERATE QUANTITY AND LOW COMBUSTIBILITY OF CONTENTS. STOCKPILES OF CONTENTS WITH LOW COMBUSTIBILITY DO NOT EXCEED 8 FT.
	ORDINARY HAZARD 2 DESIGN DENSITY: 0.2 GPM/S.F DESIGN AREA: 1,500 S.F. HYDRANT FLOW: 250 GPM CHARACTERISTICS: SPACES WITH MODERATE TO HIGH QUANTITY AND MODERATE TO HIGH COMBUSTIBILITY OF CONTENTS. STOCKPILES OF CONTENTS WITH MODERATE TO HIGH COMBUSTIBILITY DO NOT EXCEED 12 FT.
	EXTRA HAZARD 1 DESIGN DENSITY: 0.3 GPM/S.F DESIGN AREA: 2,500 S.F. HYDRANT FLOW: 500 GPM CHARACTERISTICS: SPACES WITH VERY HIGH QUANTITY AND VERY HIGH COMBUSTIBILITY OF CONTENTS. SPACES WHERE DUST, LINT, OR OTHER MATERIAL ARE PRESENT, INTRODUCING THE PROBABILITY OF RAPIDLY DEVELOPING FIRES.
	EXTRA HAZARD 2 DESIGN DENSITY: 0.4 GPM/S.F DESIGN AREA: 2,500 S.F. HYDRANT FLOW: 500 GPM CHARACTERISTICS: SPACES WITH VERY HIGH QUANTITY AND VERY HIGH COMBUSTIBILITY OF CONTENTS. SPACES WITH SUBSTANTIAL AMOUNTS OF COMBUSTIBLE OR FLAMMABLE LIQUIDS. SPACES WHERE SHIELDING OF COMBUSTIBLES IS EXTENSIVE.
	NOT IN SCOPE

SEISMIC GENERAL NOTES

- A. SEISMIC-RESTRAINT LOADING BASED ON ASCE 7-10:
1. SITE CLASS
 2. OCCUPANCY CATEGORY OF BUILDING OR STRUCTURE
 3. SEISMIC DESIGN CATEGORY C.
 4. DESIGN SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS (0.2 SECOND): (S_{ds}) = X_G (WHERE G IS THE FORCE OF GRAVITY).
 5. DESIGN SPECTRAL RESPONSE ACCELERATION AT 1-SECOND PERIOD: (S_{d1}) = X_G (WHERE G IS THE FORCE OF GRAVITY).
 6. COMPONENT IMPORTANCE FACTOR: (I_p) = 1.5.
 7. F_{pw} = $Y \times$ WEIGHT OF WATER FILLED PIPE (THIS IS THE HORIZONTAL FORCE ACTION ON THE BRACE, AS DEFINED BY NFPA 13 (2016), 9.3.5.9.3.
- B. INSTALL SEISMIC RESTRAINTS IN ACCORDANCE WITH NFPA 13:
1. INSTALL LATERAL BRACES ON ALL FEED AND CROSS MAIN LINES, REGARDLESS OF PIPE DIAMETER.
 2. INSTALL LATERAL BRACES ON BRANCH LINES LARGER THAN 2-INCH DIAMETER. (EXCEPT THAT IF THE BRANCH LINE DOES NOT EXCEED 12 FT IN LENGTH, BRACING MAY BE OMITTED.)
 3. LATERAL BRACES ARE TO BE INSTALLED WITHIN 6 FT FROM THE ENDS OF PIPES
 4. LATERAL BRACES ARE TO BE INSTALLED AT 40 FT MAXIMUM INTERVALS.
 5. WHERE HANGER RODS DO NOT EXCEED 6 INCHES LONG, LATERAL BRACING MAY BE OMITTED.
 6. A LONGITUDINAL BRACE MAY SERVE AS A LATERAL BRACE IF IT IS WITHIN 24 INCHES OF THE CENTERLINE OF THE PIPE BRACED LONGITUDINALLY.
 7. INSTALL LONGITUDINAL BRACES ON ALL FEED AND CROSS MAIN LINES, REGARDLESS OF PIPE DIAMETER.
 8. LONGITUDINAL BRACES ARE TO BE INSTALLED WITHIN 40 FT FROM THE ENDS OF PIPES.
 9. LONGITUDINAL BRACES ARE TO BE INSTALLED AT 80 FT MAXIMUM INTERVALS
 10. A LATERAL BRACE MAY SERVE AS A LONGITUDINAL BRACE IF IT IS WITHIN 24 INCHES OF THE CENTERLINE OF THE PIPE BRACED LATERALLY.
- C. INSTALL SEISMIC-RESTRAINT DEVICES USING METHODS APPROVED BY OSHPD PROVIDING REQUIRED SUBMITTALS FOR COMPONENT
- D. ATTACHMENT TO STRUCTURE: IF SPECIFIC ATTACHMENT IS NOT INDICATED, ANCHOR BRACING TO STRUCTURE AT FLANGES OF BEAMS, AT UPPER TRUSS CHORDS OF BAR JOISTS, OR AT CONCRETE MEMBERS
- E. DRILLED-IN ANCHORS:
1. IDENTIFY POSITION OF REINFORCING STEEL AND OTHER EMBEDDED ITEMS PRIOR TO DRILLING HOLES FOR ANCHORS. DO NOT DAMAGE EXISTING REINFORCING OR EMBEDDED ITEMS DURING CORING OR DRILLING. NOTIFY THE STRUCTURAL ENGINEER IF REINFORCING STEEL OR OTHER EMBEDDED ITEMS ARE ENCOUNTERED DURING DRILLING. LOCATE AND AVOID PRESTRESSED TENDONS, ELECTRICAL AND ENCOUNTERED DURING DRILLING. LOCATE AND AVOID PRESTRESSED TENDONS, ELECTRICAL AND TELECOMMUNICATIONS CONDUIT, AND GAS LINES.
- G. ADJUSTING:
1. ADJUST RESTRAINTS TO PERMIT FREE MOVEMENT OF EQUIPMENT WITHIN NORMAL MODE OF OPERATION.
2. DO NOT DRILL HOLES IN CONCRETE OR MASONRY UNTIL CONCRETE, MORTAR, OR GROUT HAS ACHIEVED FULL DESIGN STRENGTH.
3. WEDGE ANCHORS: PROTECT THREADS FORM DAMAGE DURING ANCHOR INSTALLATION. HEAVY-DUTY SLEEVE SHALL BE INSTALLED WITH SLEEVE FULLY ENGAGED IN THE STRUCTURAL ELEMENT TO WHICH ANCHOR IS TO BE FASTENED.
4. SET ANCHORS TO MANUFACTURER'S RECOMMENDED TORQUE, USING A TORQUE WRENCH.
5. INSTALL ZINC-COATED STEEL ANCHORS FOR INTERIOR AND STAINLESS-STEEL ANCHORS FOR EXTERIOR APPLICATIONS.
- F. ACCOMMODATION OF DIFFERENTIAL SEISMIC MOTION: INSTALL FLEXIBLE CONNECTIONS IN ACCORDANCE WITH NFPA 13 IN PIPING WHERE:
1. PIPING 2-1/2 INCH OR LARGER CROSSES SEISMIC JOINTS, WHERE ADJACENT SECTIONS OR BRANCHES ARE SUPPORTED BY DIFFERENT STRUCTURAL ELEMENTS, AND WHERE THE CONNECTIONS TERMINATE WITH CONNECTION TO EQUIPMENT THAT IS ANCHORED TO A DIFFERENT STRUCTURAL ELEMENT FROM ONE SUPPORTING THE CONNECTIONS AS THEY APPROACH EQUIPMENT.
 2. WITHIN 24 INCHES OF THE TOP AND BOTTOM OF ALL RISERS 2-1/2 INCH OR LARGER (IN RISERS LESS THAN 3 FT IN LENGTH, FLEXIBLE COUPLINGS MAY BE OMITTED; IN RISERS 3 FT TO 7 FT, ONE FLEXIBLE COUPLING IS ADEQUATE).
 3. WITHIN 12 IN ABOVE AND WITHIN 24 IN BELOW THE FLOOR IN MULTI FLOOR BUILDINGS FOR PIPING 2-1/2 INCH OR LARGER.
 4. ON BOTH SIDES OF CONCRETE OR MASONRY WALLS WITHIN 1 FT OF FACE OF WALL FOR PIPING 2-1/2 INCH OR LARGER, UNLESS CLEARANCE IS PROVIDED PER NFPA 13.
 5. WITHIN 24 INCHES OF BUILDING EXPANSION JOINTS FOR PIPING 2-1/2 INCH OR LARGER.
 6. WITHIN 24 INCHES OF THE TOP OF DROPS EXCEEDING 15 FEET IN LENGTH TO PORTIONS OF SYSTEMS SUPPLYING MORE THAN ONE SPRINKLER, REGARDLESS OF PIPE SIZE.
 7. WITHIN 24 INCHES ABOVE AND 24 INCHES BELOW ANY INTERMEDIATE POINTS OF SUPPORT FOR A RISER OR OTHER VERTICAL PIPE FOR PIPING 2-1/2 INCH OR LARGER.
 8. WHEN THE FLEXIBLE COUPLING BELOW THE FLOOR IS ABOVE THE TIE-IN TO THE MAIN SUPPLYING THAT FLOOR, A FLEXIBLE COUPLING SHALL BE INSTALLED EITHER ON THE HORIZONTAL PORTION WITHIN 24 INCHES OF THE TIE-IN WHERE THE TIE-IN IS HORIZONTAL OR ON THE VERTICAL PORTION OF THE TIE-IN WHERE THE TIE-IN INCORPORATES A RISER FOR PIPING 2-1/2 INCH OR LARGER.
 9. FOR DROPS TO HOSE LINES, RACK SPRINKLERS, MEZZANINES AND FREE STANDING STRUCTURES. INSTALL FLEXIBLE COUPLINGS REGARDLESS OF PIPE SIZE WITHIN 24 INCHES OF THE TOP OF THE DROP, WITHIN 24 INCHES ABOVE THE UPPERMOST DROP SUPPORT ATTACHMENT, WHERE DROP SUPPORTS ARE PROVIDED TO THE STRUCTURE, RACK, OR MEZZANINE, AND WITHIN 24 INCHES ABOVE THE BOTTOM OF THE DROP WHERE NO ADDITIONAL DROP SUPPORT IS PROVIDED.

WET SPRINKLER GENERAL NOTES

ALL PIPE, DEVICES, AND INSTALLATION SHALL FULLY COMPLY WITH NFPA 13, AND ALL REQUIRED AUTHORITIES HAVING JURISDICTION.

REFER TO NOTES ON DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. REFER TO STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR BUILDING DETAILS.

PROVIDE A COMPLETE, HYDRAULICALLY CALCULATED, FULLY AUTOMATIC WET PIPE SPRINKLER SYSTEM THROUGHOUT THE BUILDING. FIRE PROTECTION CONTRACTOR SHALL INSTALL THE FIRE PROTECTION SYSTEM IN ACCORDANCE WITH ALL APPLICABLE NFPA STANDARDS, JOB SPECIFICATIONS, AND LOCAL CODE.

FIRE PROTECTION SYSTEM(S), PIPING, VALVES AND APPURTENANCES INDICATED ON THE DRAWING ARE DIAGRAMMATIC ONLY IN THAT ALL FITTINGS AND OFFSETS MAY NOT BE SHOWN. FIRE PROTECTION CONTRACTOR SHALL VERIFY EQUIPMENT SELECTIONS, PIPE ROUTING, ETC. FOR CODE COMPLIANCE, COMPLIANCE, AND ARCHITECTURAL AND STRUCTURAL CONFORMITY. FIRE PROTECTION CONTRACTOR SHOULD THOROUGHLY SURVEY THE PROPERTY AND REVIEW ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND PLUMBING (M.E.P.) CONSTRUCTION DOCUMENTS PRIOR TO BID.

FIRE PROTECTION SHOP DRAWINGS SHALL HAVE COMPLETE REFLECTED CEILING PLANS INDICATING LOCATION OF EACH SPRINKLER HEAD, AS WELL AS PIPING LAYOUTS. PROVIDE ADDITIONAL SPRINKLER HEADS (OVER CODE MINIMUM), IF REQUESTED BY THE ARCHITECT, TO OBTAIN SYMMETRICAL CEILING LAYOUTS.

FIRE PROTECTION SYSTEM SHALL BE COMPLETE WITH BACKFLOW PREVENTER, FIRE DEPARTMENT CONNECTION, STANDPIPES, CONTROL VALVES, SPRINKLER PIPING AND HEADS, ELECTRONIC SUPERVISION AND APPURTENANCES AS REQUIRED BY NFPA AND AUTHORITIES HAVING JURISDICTION.

GENERAL CONTRACTOR SHALL CONDUCT A COORDINATION MEETING WITH THE SUBCONTRACTORS TO ESTABLISH CLEARANCE REQUIREMENTS NEEDED FOR M.E.P. WORK PRIOR TO FABRICATION OF THE SPRINKLER SYSTEM. ANY RELOCATION OF FIRE SPRINKLER SYSTEM REQUIRED FOR PROPER INSTALLATION OF M.E.P. SYSTEMS SHALL BE AT THE FIRE PROTECTION CONTRACTOR'S EXPENSE.

FIRE PROTECTION CONTRACTOR SHALL BASE BID ON CAREFUL COORDINATION OF MECHANICAL DUCT, MECHANICAL AND PLUMBING PIPING, ELECTRICAL, AND STRUCTURAL SYSTEMS IN THE BUILDING.

HYDRAULIC CALCULATIONS SHALL BE BASED ON A WATER FLOW TEST OBTAINED FROM THE CITY OF **LEE'S SUMMIT** BY THE FIRE PROTECTION CONTRACTOR. CONTRACTOR SHALL VERIFY FLOW TEST DATA WITH LOCAL AUTHORITIES. IF A CURRENT TEST IS NOT AVAILABLE, CONTRACTOR SHALL CONDUCT A PROPER FLOW TEST PRIOR TO PREPARATION OF SHOP DRAWINGS. PROVIDE A MINIMUM OF 10 PSI SAFETY FACTOR FOR ALL HYDRAULIC CALCULATIONS. PIPE SIZING INDICATED ON THE DRAWINGS IS FOR INFORMATIONAL PURPOSES ONLY. PIPE SIZING SHALL BE ESTABLISHED BY THE FIRE PROTECTION CONTRACTOR. EXCEPTION: STANDPIPES SHALL BE SIZED AS INDICATED ON THE DRAWINGS OR LARGER. NOTE: AVOID SYSTEM PRESSURES EXCEEDING 175 PSI.

PROVIDE A REDUCED PRESSURE ZONE (R.P.Z.) BACKFLOW PREVENTER TO ISOLATE THE SPRINKLER SYSTEM FROM THE MAIN SUPPLY. COORDINATE REQUIREMENTS WITH THE CITY OF **LEE'S SUMMIT** AND THE STATE OF **MISSOURI**.

FIRE PROTECTION SYSTEM SHALL INTERFACE WITH THE BUILDING FIRE ALARM SYSTEM. REFER TO ELECTRICAL.

ALL CONTROL VALVES SHALL HAVE ELECTRONIC SUPERVISION.

SPECIAL CONSIDERATION SHALL BE GIVEN TO AREAS THROUGHOUT THE BUILDING SUCH AS DROPPED SOFFITS, RAISED CEILINGS AND LIGHTING SOFFITS THAT NECESSITATE ADDITIONAL SPRINKLER HEADS. REFER TO ARCHITECTURAL DRAWINGS FOR REFLECTED CEILING PLANS AND BUILDING DETAILS.

ALL SPRINKLER HEADS FOR LIGHT HAZARD AND ALL STANDARD SPRAY SPRINKLER HEADS FOR ORDINARY HAZARD SHALL BE QUICK RESPONSE.

ALL CEILING MOUNTED SPRINKLER HEADS SHALL BE CHROME WITH CHROME RECESSED ESCUTCHEONS, UNLESS NOTED OTHERWISE ON FIRE PROTECTION PLANS OR SPECIFICATIONS.

ALL SPRINKLER HEADS INSTALLED IN EXPOSED STRUCTURE SHALL BE BRASS UPRIGHT, UNLESS NOTED OTHERWISE ON FIRE PROTECTION PLANS OR SPECIFICATIONS.

ALL CEILING MOUNTED SPRINKLER HEADS SHALL BE LOCATED IN THE CENTER OF CEILING TILES IN ALL PUBLIC AREAS. BRAIDED FLEXIBLE SPRINKLER DROP CONNECTIONS MAY BE USED FOR EASE OF INSTALLATION, SPECIFIC SPRINKLER HEAD LOCATION OR SPECIFIC OWNER REQUIREMENTS. EXCEPTION: CLOSETS, STORAGE ROOMS, EQUIPMENT ROOMS AND OTHER SIMILAR NON-PUBLIC AREAS ARE NOT REQUIRED TO BE CENTER OF TILE BUT SHALL BE NO CLOSER THAN 6" TO CEILING GRID.

ROOMS AND OTHER SIMILAR NON-PUBLIC AREAS ARE NOT REQUIRED TO BE CENTER OF TILE BUT SHALL BE NO CLOSER THAN 6" TO CEILING GRID.

PROVIDE SPRINKLER SYSTEM MAIN DRAIN IN ACCORDANCE WITH NFPA 13.

PROVIDE AUXILIARY DRAINS FOR ALL TRAPPED PIPING SECTIONS IN ACCORDANCE WITH NFPA 13.

ALL DRAIN PIPING SHALL TERMINATE AT THE EXTERIOR WITH 45 DEGREE ELBOW DOWN. INSTALL THE DRAIN IN A MANNER TO PREVENT FLOODING OR DAMAGE TO LANDSCAPING, AND TO PREVENT WETTING OF WALKWAYS. EXCEPTION: DRAIN PIPING MAY TERMINATE AT INTERIOR FLOOR DRAINS IF THE DRAIN HAS BEEN SIZED APPROPRIATELY. COORDINATE WITH PLUMBING CONTRACTOR FOR LOCATION OF FLOOR DRAIN.

INSTALL PIPING HORIZONTALLY AND AT RIGHT ANGLES TO WALLS AND CEILINGS.

ALL SPRINKLER MAIN PIPING SHALL BE SCHEDULE 10 WITH ROLL GROOVED AND WELDED OUTLETS, UNLESS NOTED OTHERWISE. FITTINGS AND COUPLINGS SHALL BE STANDARD GROOVED, UNLESS NOTED OTHERWISE.

ALL SPRINKLER BRANCH LINE PIPING SHALL BE BLACK SCHEDULE 40, UNLESS NOTED OTHERWISE. FITTINGS SHALL BE STANDARD "BLACK" GRADE CAST IRON, DUCTILE IRON OR MALLEABLE IRON, UNLESS NOTED OTHERWISE.

ALTERNATIVE STEEL PIPE SCHEDULES ALLOWED BY NFPA 13 ARE NOT ACCEPTABLE ON THIS PROJECT.

ALL FIRE PROTECTION PIPING, FITTINGS, SUPPORTS AND ACCESSORIES IN EXPOSED AREAS SHALL BE PREPARED FOR FINISH PAINTING. PIPING, FITTINGS, SUPPORTS AND ACCESSORIES IN MECHANICAL ROOMS SHALL BE PAINTED OSHA RED. ALL PAINTING SHALL BE PERFORMED BY OTHERS.

FIRE PROTECTION CONTRACTOR SHALL PROVIDE PROTECTION FOR SPRINKLER HEADS IN AREAS WHERE THE CEILING AND SURROUNDING AREAS ARE TO BE PAINTED. FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF SPRINKLER PROTECTION AFTER PAINTING WORK IS COMPLETE. ANY SPRINKLER HEAD WITH PAINT OR TEXTURE OVERSPRAY SHALL BE REPLACED BY THE FIRE PROTECTION CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.

PROVIDE HEAD GUARDS ON ALL SPRINKLER HEADS AT OR BELOW AN ELEVATION OF 7'-0" AFF. OR THAT OTHERWISE MAY BE SUBJECT TO MECHANICAL DAMAGE, SUCH AS IN THE MECHANICAL ROOMS.

SEISMIC BRACING/ RESTRAINT IS NOT REQUIRED FOR THIS PROJECT.

FIRE PROTECTION PLANS SHALL BE SUBMITTED TO ALL REQUIRED LOCAL AND STATE AUTHORITIES.

FLEX SPACES

60 SE Thompson Dr.
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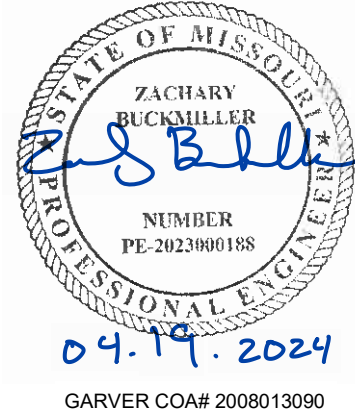
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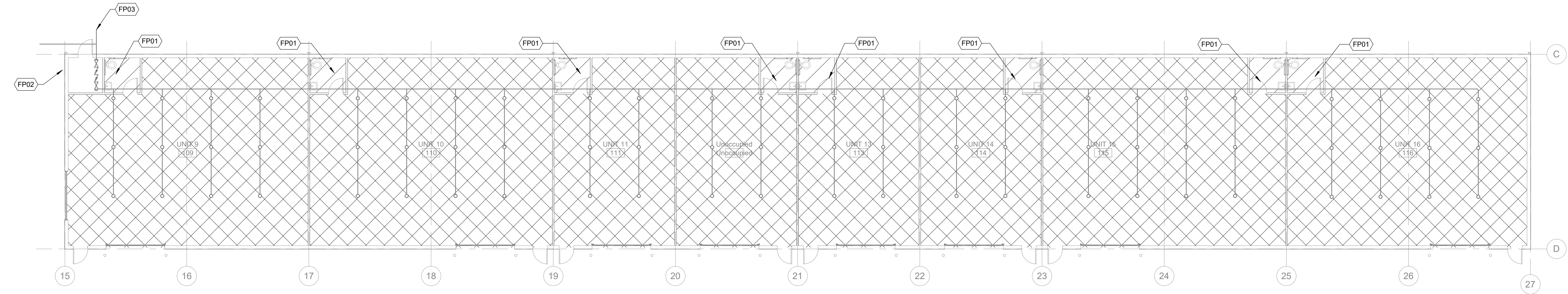


FIRE SUPPRESSION NOTES,
LEGENDS AND SPECIFICATIONS

Sheet

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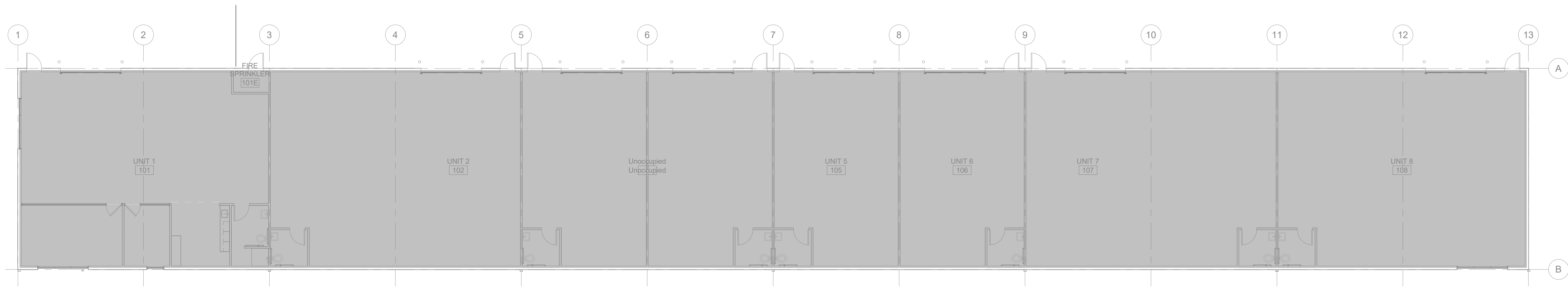
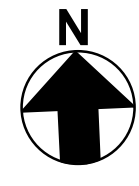
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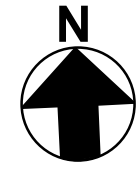
2 FIRE SUPPRESSION FLOOR PLAN - BUILDING B
SCALE: 3/32" = 1'-0"

KEYED NOTES

- FP01 PROVIDE FIRE PROTECTION HEADS ABOVE CEILING SPACED BASED ON ORDINARY HAZARD 1
- FP02 SIAMESE FIRE DEPARTMENT CONNECTION. PROVIDE HORN AND STROBE ABOVE.
- FP03 REFER TO CIVIL PLANS FOR FIRE SERVICE CONNECTION AND CONTINUATION.



1 FIRE SUPPRESSION FLOOR PLAN - BUILDING A
SCALE: 3/32" = 1'-0"



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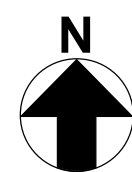
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FIRE SUPPRESSION FLOOR PLANS

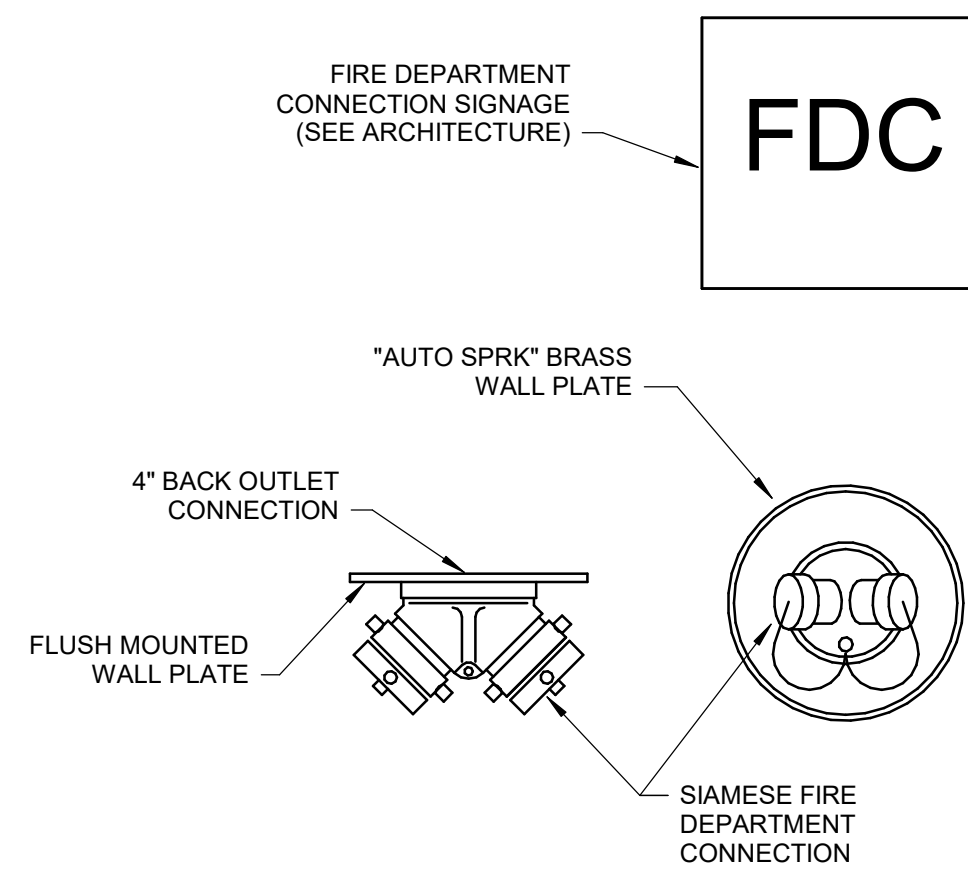
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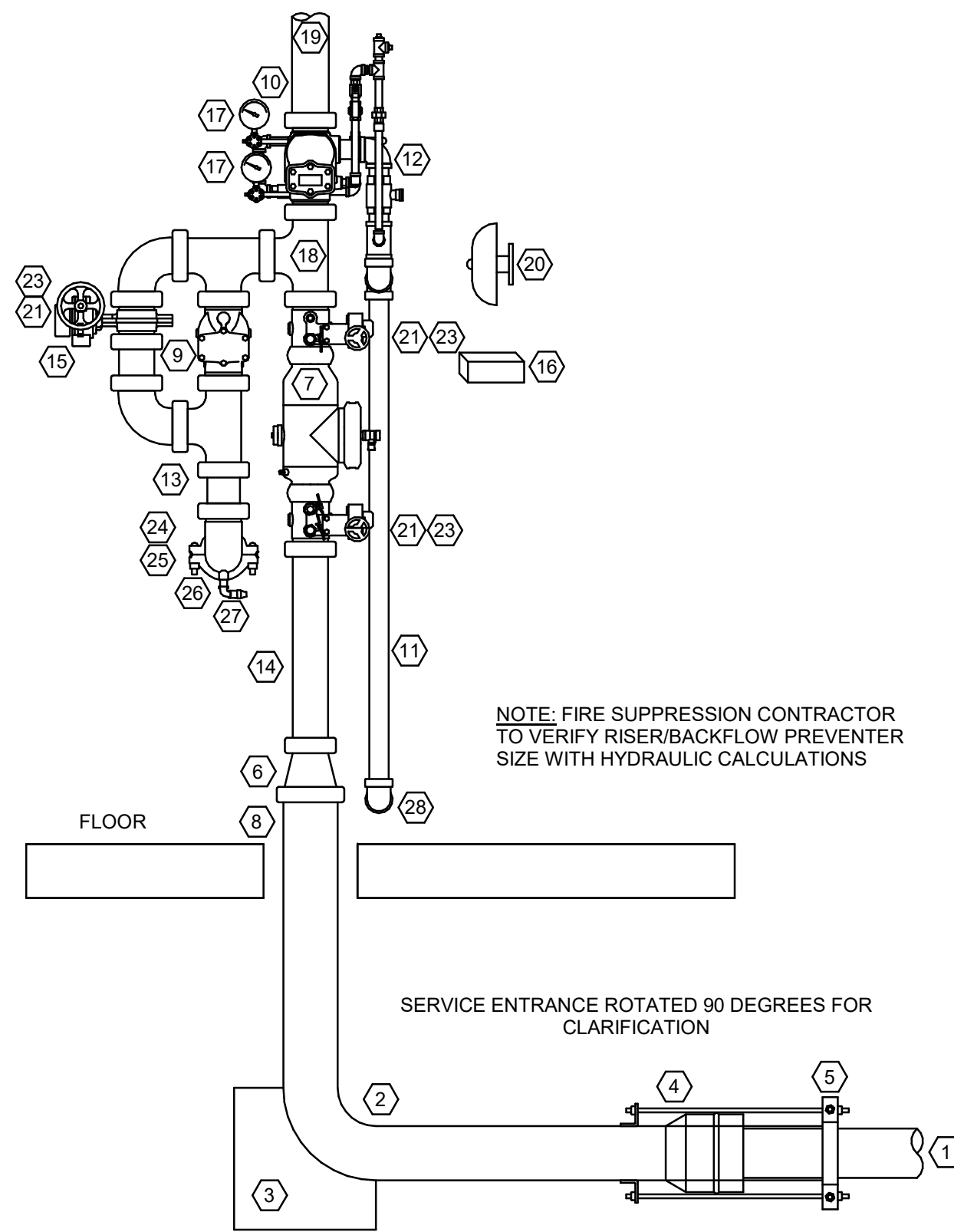
1 FDC DETAIL

SCALE: NONE



2 FIRE SUPPRESSION RISER DETAIL

SCALE: NOT TO SCALE



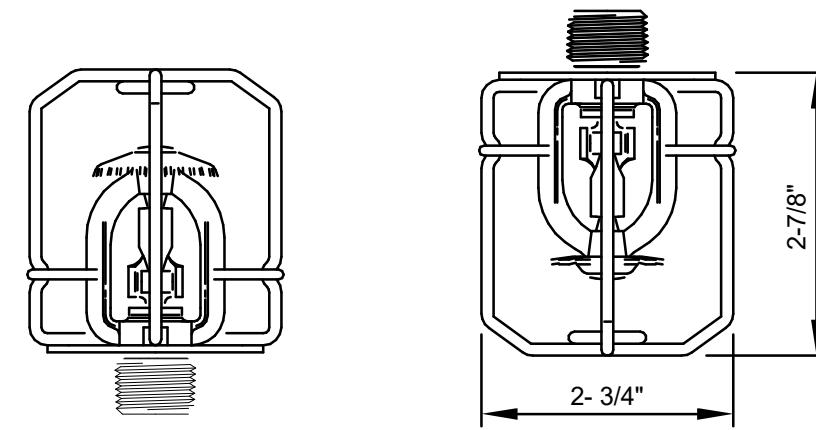
EQUIPMENT NOTES

- 6" UTILITY FIRE MAIN
- 6" STAINLESS STEEL ONE PIECE RISER (SHOWN MFxGROOVE CONFIGURATION)
- CONCRETE THRUST BLOCK (PER NFPA-24)
- CORROSION RESISTANT THREADED ROD THRUST RESTRAINT
- 6" GALVANIZED PIPE CLAMP
- 6" X 4" G X G REDUCER
- AMES C200 (OR EQUAL) 4" (GxG) DOUBLE CHECK ASSEMBLY WITH INDICATING BFG VALVES
- SLEEVE WITH NOMINAL 4-INCH ANNULAR CLEARANCE AND FILL WITH FLEXIBLE MATERIAL
- 4" GROOVED SWING CHECK VALVE
- 4" ALARM CHECK VALVE WITH TRIM
- 2" SCH. 40 THREADED DRAIN PIPE
- MAIN DRAIN VALVE
- 4" SCH. 40 GROOVED PIPE TO FIRE DEPARTMENT CONNECTION
- 4" SPOOL PIECE
- 4" GROOVED BUTTERFLY TEST VALVE
- SPARE HEAD BOX (STOCKED WITH HEADS & WRENCH)
- 3" WATER PRESSURE GAUGE
- HYDRAULIC DATA PLATE
- 4" SCH. 40 PIPE (SYSTEM FEED)
- WEATHERPROOF EXTERIOR BELL (BY FIRE ALARM CONTRACTOR)
- SUPERVISORY CIRCUIT (BY OTHERS)
- NOT USED
- VALVE SUPERVISORY "TAMPER" SWITCH
- 4" SCH. 40 GxG SPOOL (2.5" x 2.5" SIAMESE FIRE DEPARTMENT CONNECTION). COORDINATE FINAL FDC LOCATION WITH FIRE DEPARTMENT.
- "FDC" SIGNAGE: 18"x18" MINIMUM SIZE
- 4" GROOVED DRAIN ELBOW
- AUTOMATIC BALL DRIP VALVE
- EXTEND 1.25" DRAIN PIPE TO EXTERIOR DRAIN (INSTALL 1.25" GALVANIZED 45 ELBOW WITH WALL PLATE)



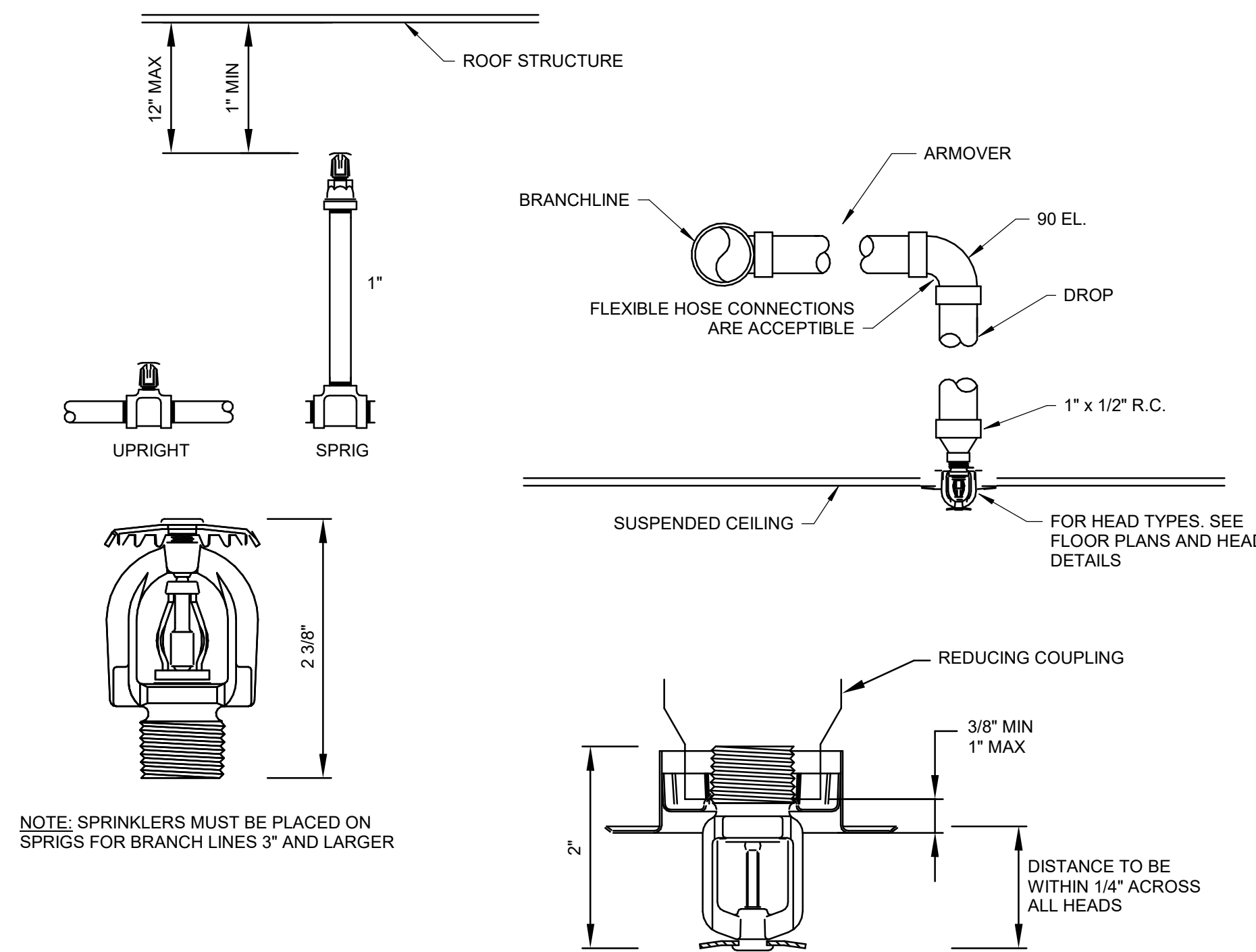
3 SPRINKLER GUARD DETAIL

SCALE: SCALE: NONE



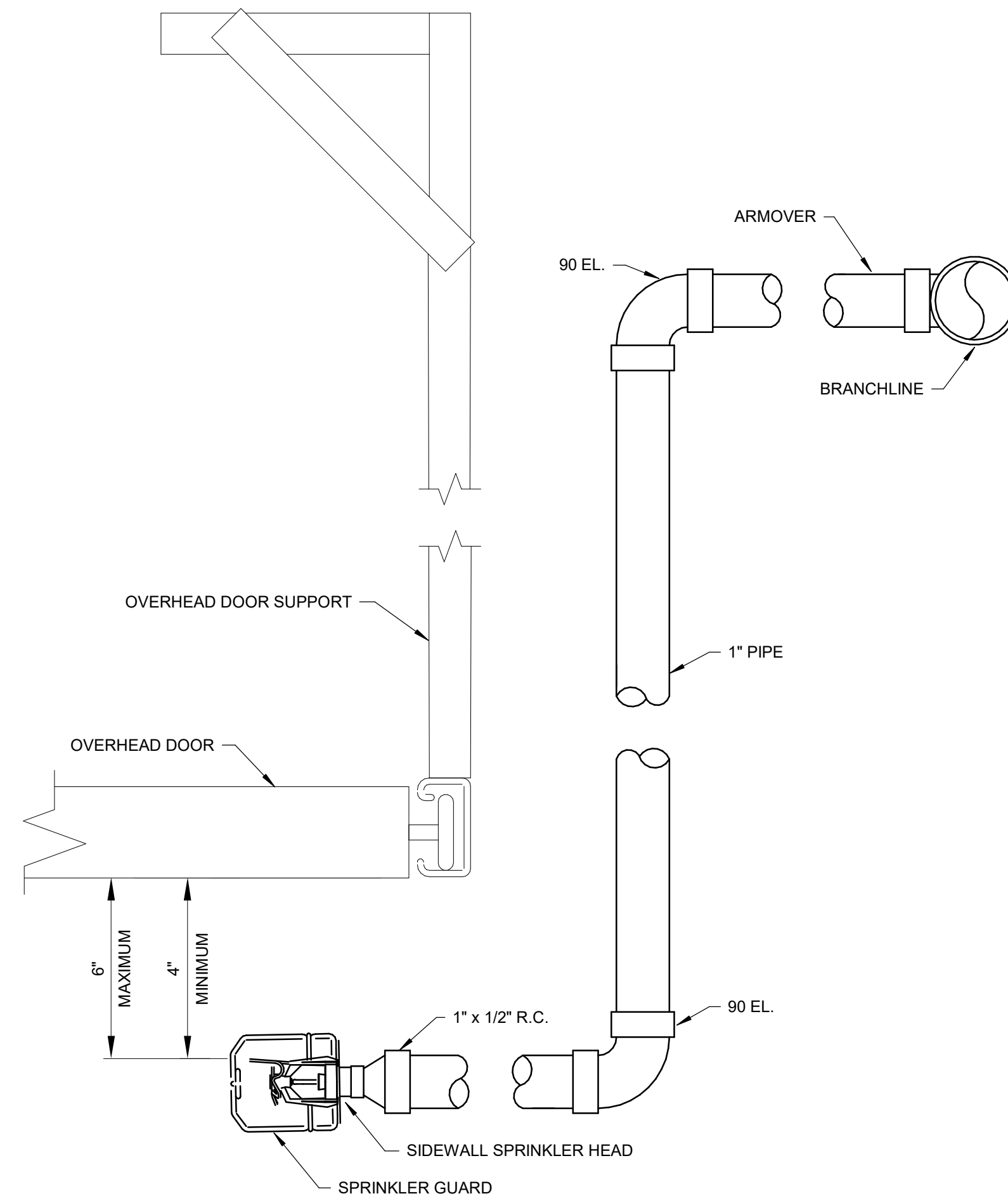
4 TYPICAL SPRINKLER DETAILS

SCALE: SCALE: NONE



5 OVERHEAD DOOR SPRINKLER DETAIL

SCALE: NONE



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FIRE SUPPRESSION DETAILS

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