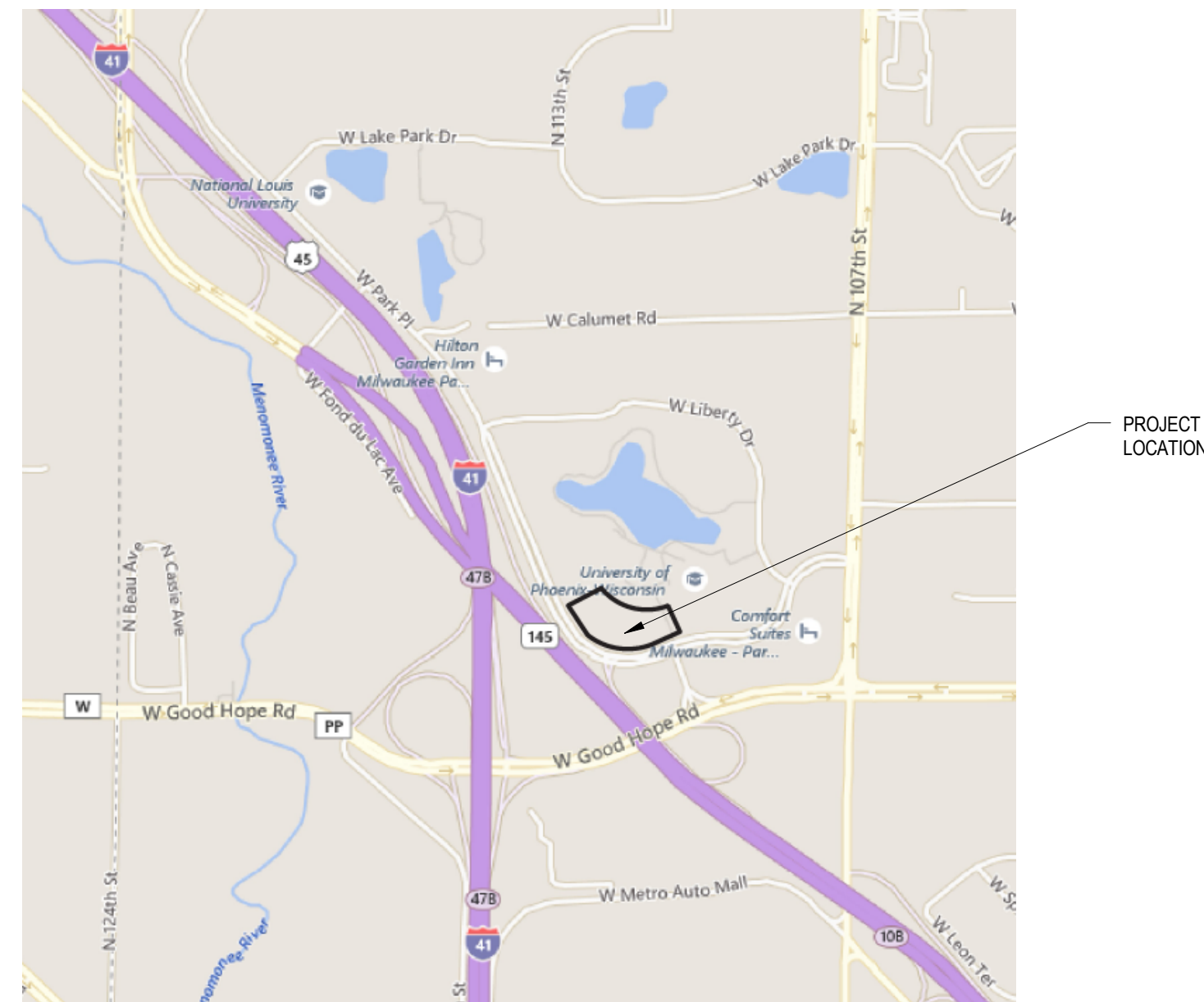


Waters II at Park Place

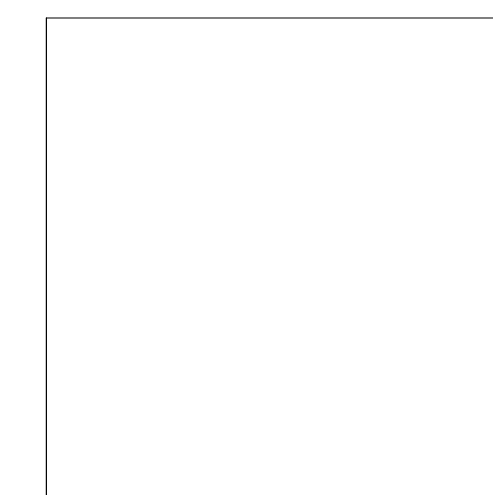
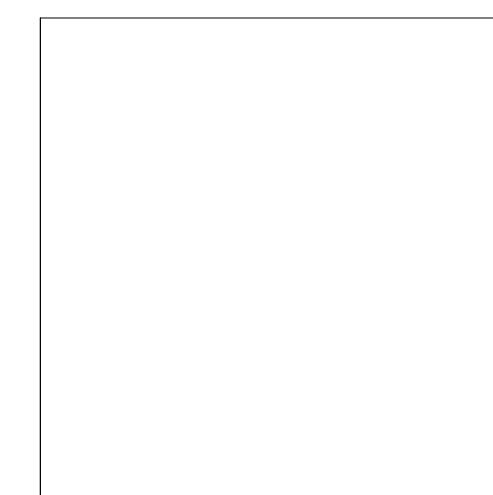
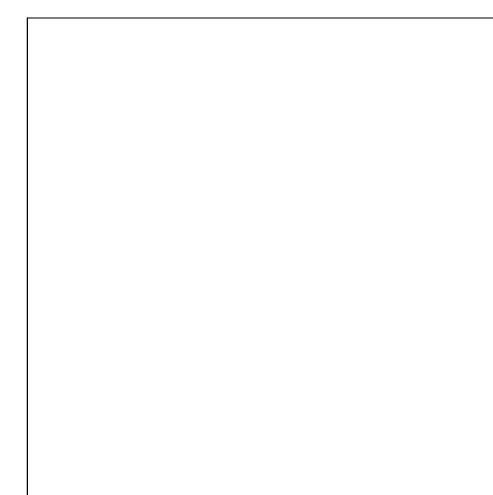
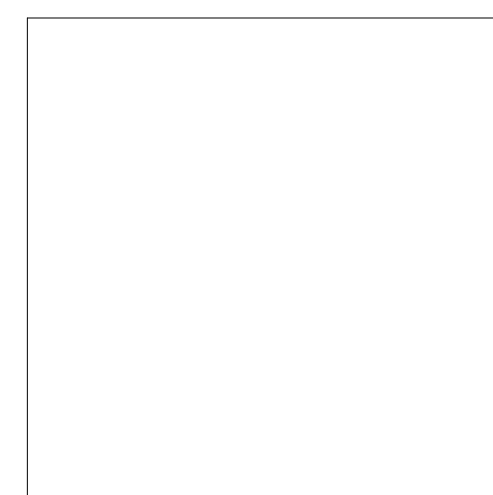
CORE & SHELL PACKAGE
CONSTRUCTION DOCUMENTS
- PLAN COMMISSION
JULY 14, 2017



833 East Michigan Street Suite 400,
Milwaukee, Wisconsin 53202
414.443.0700



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 ARCHITECTURAL STUDIOS, INC.
 2122 W. Mount Vernon Avenue | Milwaukee, WI 53233 | zstudios.com
 TELEPHONE [414] 476.9500
 FACSIMILE [414] 476.8582



CIVIL / LANDSCAPE

THE SIGMA GROUP
Single Source. Sound Solutions.
www.thesigmagroup.com
1300 West Canal Street
Milwaukee, WI 53233
Phone: 414-643-4200
Fax: 414-643-4210

- CIVIL
- C001 SITE SURVEY
 - C002 SITE PREPARATION & EROSION CONTROL PLAN
 - C100 SITE PLAN
 - C200 GRADING PLAN
 - C300 UTILITY PLAN
 - C400 DETAILS
 - C401 DETAILS
 - C402 DETAILS
 - C500 SPECIFICATIONS



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Milwaukee, Wisconsin 53208
414.530.1060

LANDSCAPE
L100 LANDSCAPE PLAN

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2122 W. Mount Vernon Avenue | Milwaukee, WI 53233 | zstudios.com
TELEPHONE [414] 476.9500
FACSIMILE [414] 476.8582

- ARCHITECTURAL CORE & SHELL
- T0.01CS COVER SHEET BID PACK 1
 - A1.0 ARCHITECTURAL SITE PLAN
 - A1.00CS FIRST FLOOR PLAN - CS
 - A1.20 ROOF PLAN
 - A2.00 NORTHSOUTH ELEVATIONS
 - A2.01 NORTHSOUTH ELEVATIONS
 - A2.02 EASTWESTMISC ELEVATIONS
 - A3.00 BUILDING SECTIONS
 - A3.10 WALL SECTIONS
 - A3.11 WALL SECTIONS
 - A3.12 WALL SECTIONS

STRUCTURAL

HARWOOD ENGINEERING CONSULTANTS
255 North 21st Street Milwaukee, Wisconsin 53233
414.475.5554 414.473.9299 fax - harwood@hecl.com

MECHANICAL

HARWOOD ENGINEERING CONSULTANTS
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PLUMBING / FIRE PROTECTION

HARWOOD ENGINEERING CONSULTANTS
255 North 21st Street Milwaukee, Wisconsin 53233
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ELECTRICAL

HARWOOD ENGINEERING CONSULTANTS
255 North 21st Street Milwaukee, Wisconsin 53233
414.475.5554 414.473.9299 fax - harwood@hecl.com

Project:
Waters II

Revisions:

No.	Date	Description

Project No:
170025.00

Sheet No:

T0.01CS

DEVELOPER:



833 East Michigan Street Suite 400,
 Milwaukee, Wisconsin 53202
 414.443.0700

Consultant:



255 North 21st Street Milwaukee, Wisconsin 53233
 414.475.5554 414.473.9299 fax harwood@hcd.com
 HEC Project Number: 100042.00

Consultant:



Single Source. Sound Solutions.
 1300 West Canal Street Milwaukee, Wisconsin 53233
 414.643.4200 414.643.4210 fax
 www.thesigmagroup.com

Project:

The Waters II
 Core & Shell

Location:

11011 W Park Place,
 Milwaukee, WI

Key Plan:

Construction Documents

Sheet:

Site Survey

Scale:

1" = 30'

Revisions:

No.	Date	Description

Date:

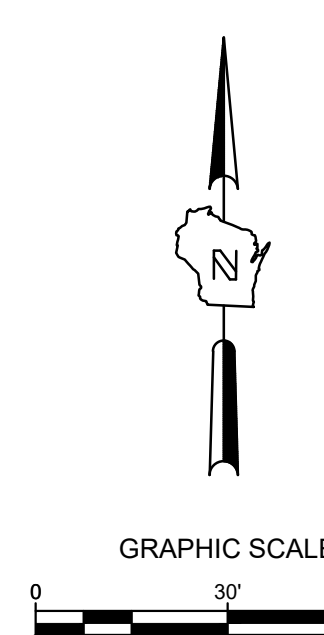
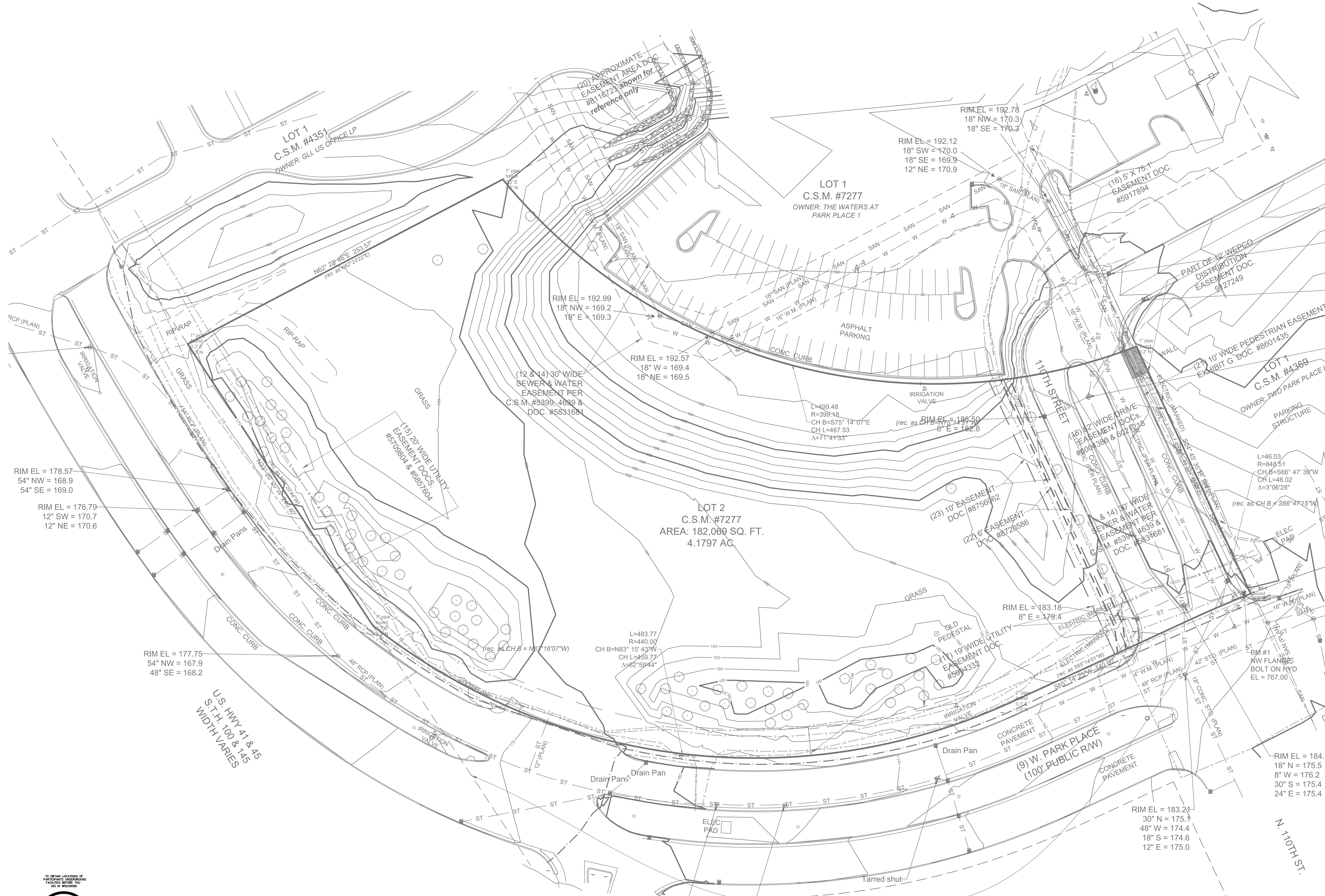
07/14/2017

Project No:

170025.00

Sheet No:

C 001



LEGEND:

---	SECTION 1/4 SECTION LINE	---	PROPERTY LINE
- - - -	EASEMENT	---	CHAIN LINK FENCE
~ ~ ~ ~	TREE LINE	---	OVERHEAD UTILITY LINE
OH	OH OVERHEAD UTILITY LINE	E	E ELECTRIC
T	T TELEPHONE	FO	FO FIBER OPTIC
CTV	CTV CABLE TV	SAN	SAN SANITARY SEWER
FM	FM FORCE MAIN	ST	ST STORM SEWER
W	W WATER MAIN	G	G GAS
G	G GAS	---	EXISTING CONTOUR

○	MANHOLE	○	IRON PIPE FOUND/SET
⊕	CATCH BASIN	⊕	REBAR FOUND/SET
⊕	CATCH BASIN (ROUND)	⊕	CHISELED CROSS FOUND/SET
●	ROOF DRAIN	⊕	PK NAIL FOUND/SET
⊕	HYDRANT	⊕	SPIKE/NAIL
⊕	WATER VALVE	⊕	MONUMENT
⊕	GAS VALVE	⊕	BENCHMARK
⊕	UTILITY POLE	⊕	SIGN
⊕	GUY WIRE	○	DECIDUOUS TREE
⊕	GAS METER	⊕	CONIFEROUS TREE
⊕	ELECTRIC METER	⊕	BUSH
⊕	UTILITY PEDESTAL	⊕	POST
⊕	TRAFFIC SIGNAL		
⊕	LIGHT POLE		
⊕	SOIL BORING		
⊕	MONITORING WELL		

- GENERAL NOTES:**
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 3. DRAWING IS BASED ON FIELD SURVEY COMPLETED BY THE SIGMA GROUP ON MARCH 27, 2017.
 4. DATUM FOR THE PROJECT SURVEY IS CITY OF THE MILWAUKEE DATUM. BENCHMARK FOR THE PROJECT SURVEY IS THE NW FLANGE BOLT ON HYDRANT (SHOWN ON MAP AS BM#1) WITH AN ELEVATION OF 186.57.

File: I:\Irgens Development\15566 - West Park Place\050 CAD\C - Civil\Plane\500 Site Survey\15566 Site Survey.dwg

NO DATA LOCATED OF
 PARTIALS UNDERGROUND
 FACILITIES SHOWN
 ON THIS DRAWING

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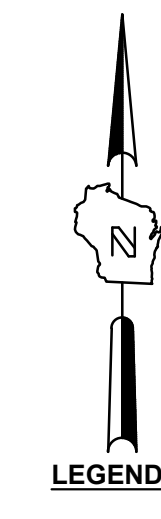
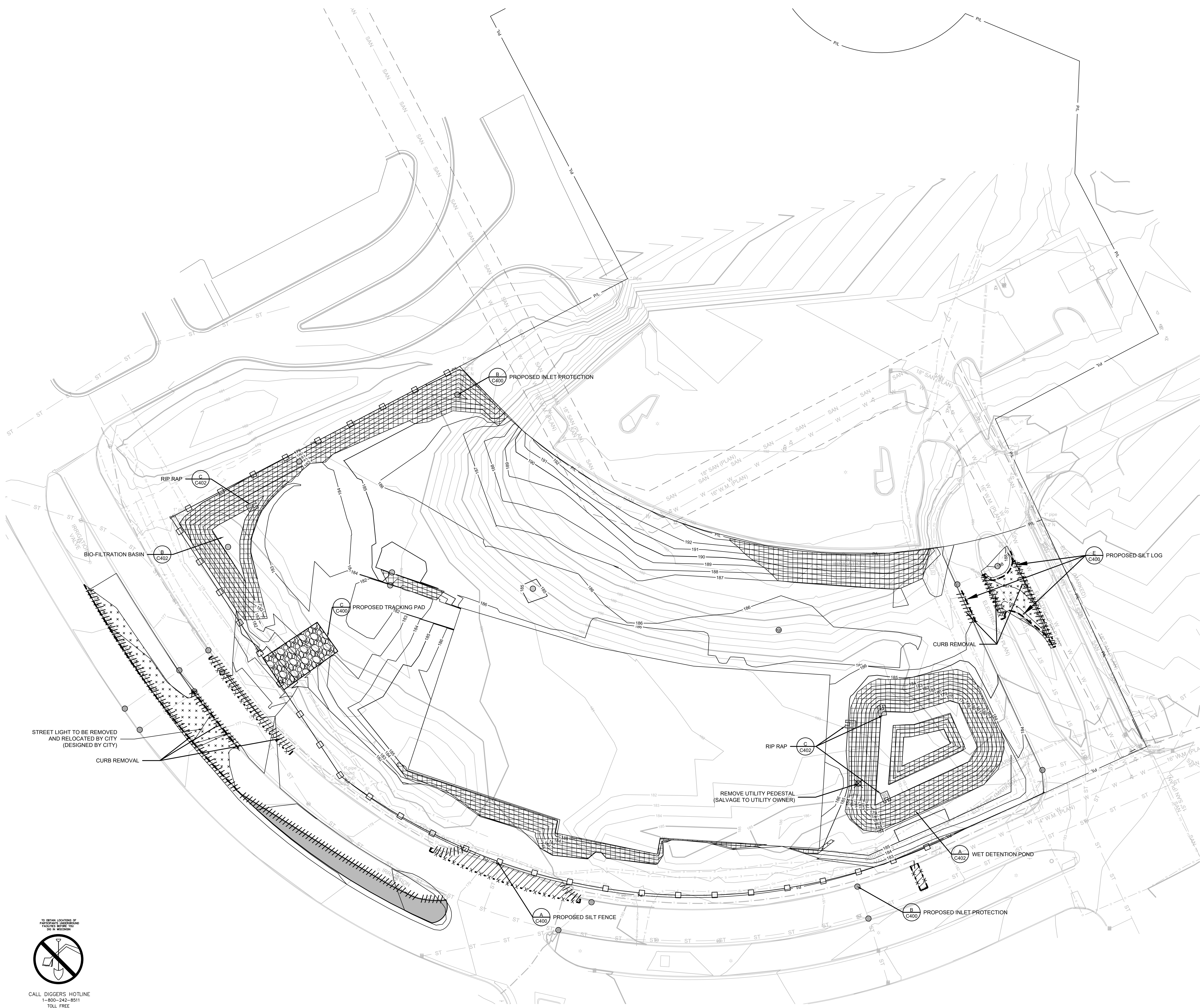
MILW. AREA 259-1181

THE UNDERGROUND UTILITY INFORMATION SHOWN ON THIS MAP IS BASED ON FIELD MARKINGS AND INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED.

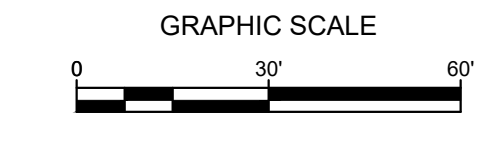
(11) ACCESS APPROVED BY STATE
 HIGHWAY COMMISSION PER C.S.M.
 5399 & 7277

U.S. HWY 41 & 45
 S.T.H. 100 & 145
 WIDTH VARIES

File: I:\Irgens Development\15566 - West Peak Plaza\050 CAD\C - Civil\500 Production - Civil\500 Production - Civil\501-Site Preparation & Erosion Control\15566 SITE PREP.dwg



LEGEND:



- PROPOSED SILT LOG (E C400)
- PROPOSED SILT FENCE (A C400)
- PROPOSED INLET PROTECTION (B C400)
- ▨ PROPOSED TRACKING PAD (C C400)
- ▩ PROPOSED EROSION MATTING WISDOT APPROVED CLASS 1 TYPE B (D C400)
- 5 — PROPOSED CONTOUR
- 5 — EXISTING CONTOUR
- ||||| CURB REMOVAL
- X - X - X - CURB REMOVAL
- ⊗ STRUCTURE REMOVAL
- ▨ PAVEMENT REMOVAL
- ++ LANDSCAPE REMOVAL
- ▨ RIP RAP (A C400)

GENERAL NOTES:

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5. SEE SHEET C400 FOR A COMPLETE LIST OF EROSION CONTROL NOTES AND DETAILS. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO START OF LAND DISTURBING ACTIVITIES.
6. DO NOT BEGIN LAND DISTURBING ACTIVITIES UNTIL AN EROSION CONTROL PERMIT IS OBTAINED FROM LOCAL JURISDICTION.



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MILWAUKEE AREA 259-1181
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DEVELOPER:
IRGENS
833 East Michigan Street Suite 400,
Milwaukee, Wisconsin 53202
414.443.0700

CONSULTANT:
HARWOOD
ENGINEERING
CONSULTANTS
255 North 21st Street Milwaukee, Wisconsin 53233
414.475.5554 414.473.9299 fax harwood@hed.com
HEC Project Number: 100042.00

CONSULTANT:
SIGMA
GROUP
Single Source. Sound Solutions.
1300 West Canal Street Milwaukee, Wisconsin 53233
414.643.4200 414.643.4210 fax
www.thesigmagroup.com

Project:
The Waters II
Core & Shell
Location:
11011 W Park Place,
Milwaukee, WI
Key Plan:

Construction Documents
Sheet:
**SITE PREPARATION AND
EROSION CONTROL PLAN**

Scale:
1" = 30'

Revisions:

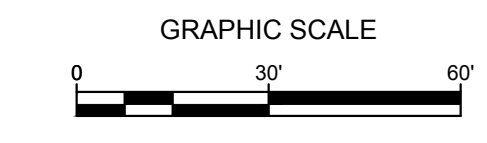
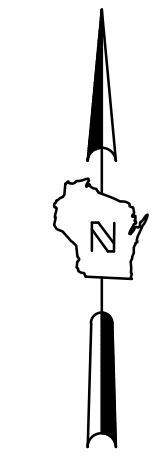
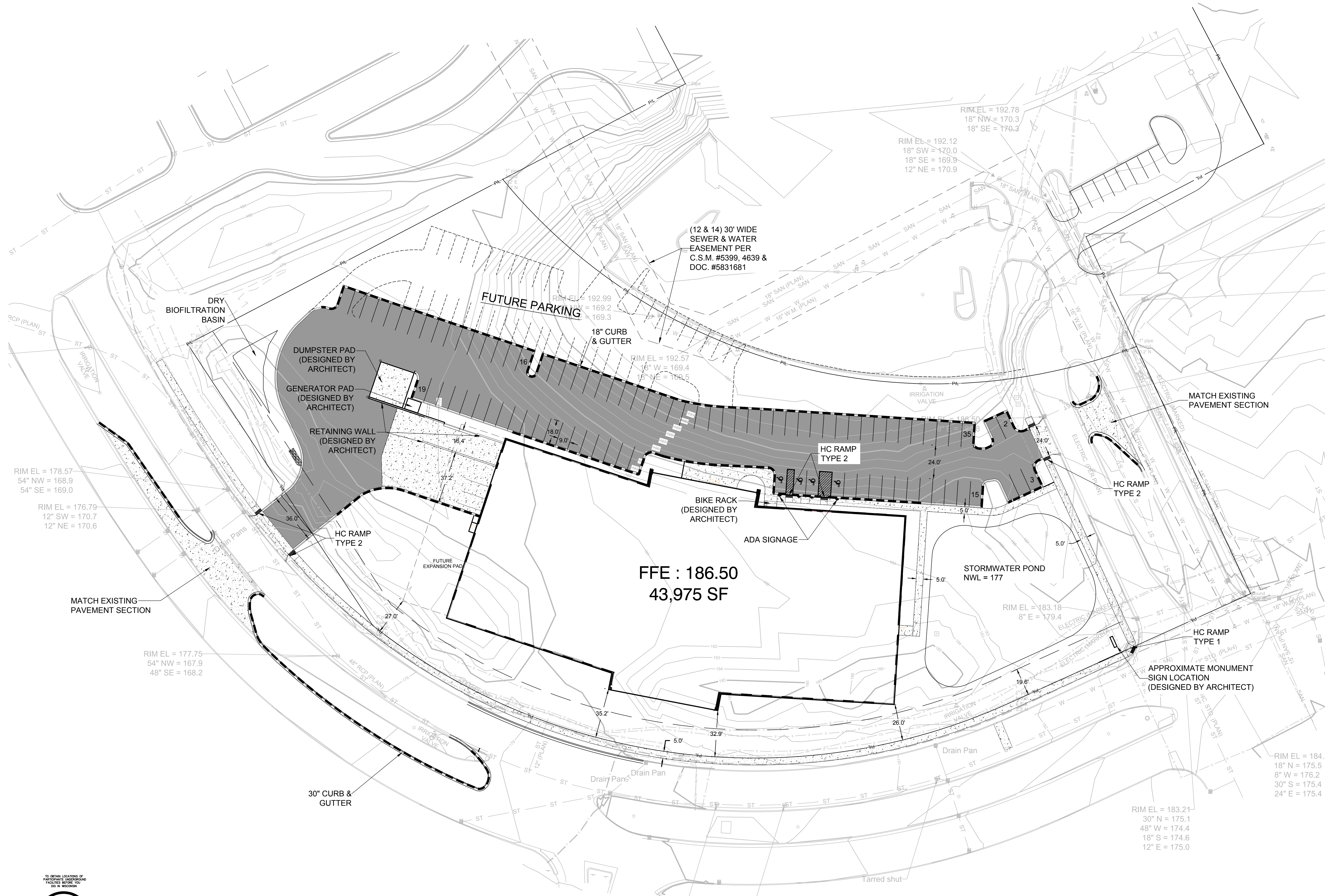
No.	Date	Description

Date:
07/14/2017

Project No:
170025.00

Sheet No:

SITE INFORMATION:
 TOTAL PARKING: 90
 TOTAL DISTURBED AREA: 152,024 SF (3.49 AC)
 IMPERVIOUS AREA: 89,242 (2.05 AC)
 PERVIOUS AREA: 62,782 SF (1.44 AC)
 PARKING ISLAND AREA: 582 SF
 PARKING ISLAND AREA REQUIRED: 450 SF



LEGEND:

	CONCRETE SURFACE	
	ASPHALT SURFACE	
	CURB & GUTTER (ACCEPT)	
	CURB & GUTTER (REJECT)	
	HC RAMP TYPE 1	
	HC RAMP TYPE 2	

- GENERAL NOTES:**
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 5. DIMENSIONS ARE FROM FACE OF CURB OR EDGE OF PAVEMENT.
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NO DETAIL LOCATIONS OF
 PARTISAN UNDERGROUND
 FACILITIES SHOWN
 EX IN SECTION

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 MILWAUKEE AREA 259-1181

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DEVELOPER:
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 833 East Michigan Street Suite 400,
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Consultant:
HARWOOD ENGINEERING CONSULTANTS
 255 North 21st Street Milwaukee, Wisconsin 53233
 414.475.5554 414.473.9299 fax harwood@hrec.com
 HEC Project Number: 100042.00

Consultant:
SIGMA GROUP
 Single Source. Sound Solutions.
 1300 West Canal Street Milwaukee, Wisconsin 53233
 414.643.4200 414.643.4210 fax
 www.thesigmagroup.com

Project:
 The Waters II
 Core & Shell

Location:
 11011 W Park Place,
 Milwaukee, WI

Key Plan:

Construction Documents
 Sheet:
Site Plan

Scale:
 1" = 30'

Revisions:

No.	Date	Description

Date:
 07/14/2017

Project No:
 170025.00

Sheet No:

File: I:\Irgens Development\16566 - West Park Place\050 CAD\C - Civil\16566-Site Dimension Plans\16566-Site Dim Plan.dwg

DEVELOPER:



833 East Michigan Street Suite 400,
 Milwaukee, Wisconsin 53202
 414.443.0700

Consultant:



255 North 21st Street Milwaukee, Wisconsin 53233
 414.475.5554 414.473.5299 fax harwood@hed.com
 HEC Project Number: 100042.00

Consultant:



Single Source. Sound Solutions.
 1300 West Canal Street Milwaukee, Wisconsin 53233
 414.643.4200 414.643.4210 fax
 www.thesigmagroup.com

Project:

The Waters II

Core & Shell

Location:

11011 W Park Place,

Milwaukee, WI

Key Plan:

Construction Documents

Sheet:

Grading Plan

Scale:

1" = 20'

Revisions:

No.	Date	Description

Date:

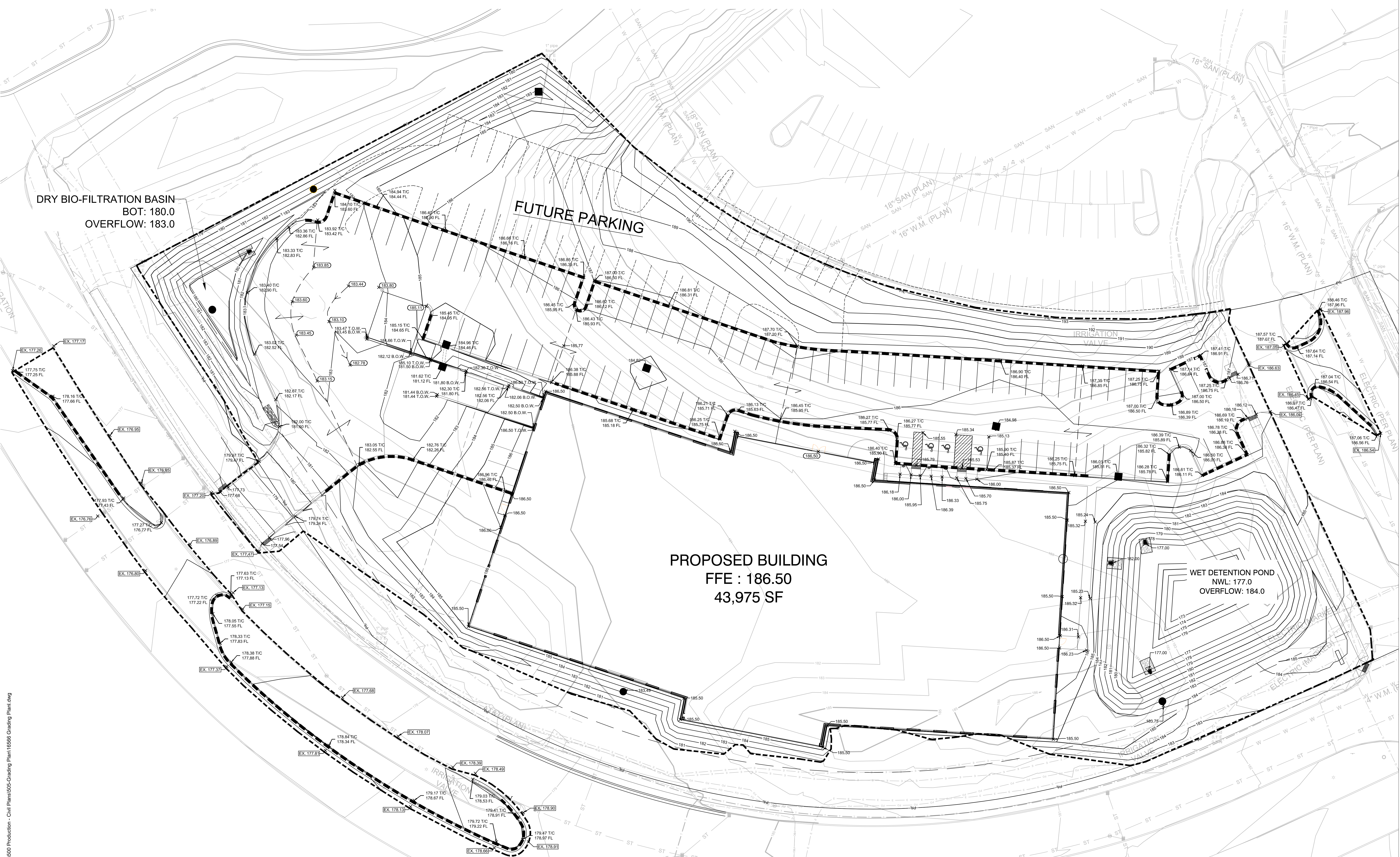
07/14/2017

Project No:

170025.00

Sheet No:

C 200



PROPOSED BUILDING
 FFE : 186.50
 43,975 SF

GENERAL NOTES:

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7. EARTHWORK SHALL BE IN ACCORDANCE WITH GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.

LEGEND:

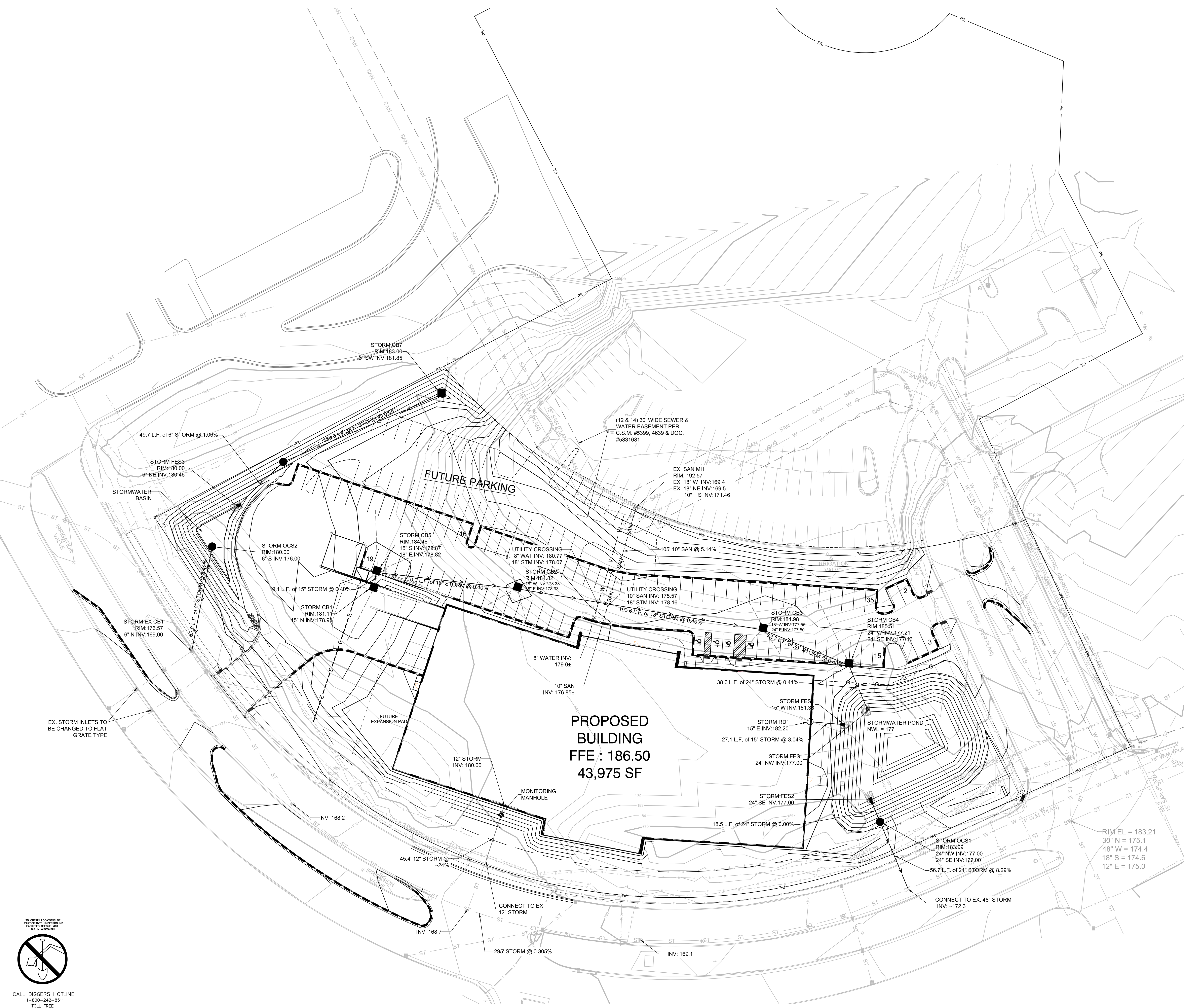
- - - - - EXISTING CONTOUR
- - - - - PROPOSED CONTOUR
- - - - - PROPOSED CURB & GUTTER SPOT GRADE
- TIC: TOP OF CURB GRADE
- FL: FLOW LINE CURB GRADE
- - - - - PROPOSED ASPHALT SPOT GRADE
- - - - - LIMITS OF DISTURBANCE

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 MILW. AREA 259-1181

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File: Irgens Development\16569 - West Park Place\040 CAD\C - Civil Plans\05-Grading Plan\05666 Grading Plan.dwg

File: I:\Irgens Development\15566 - West Park Place\050 CAD\C - Civil\500 Production - Civil\Plane506\Utility Plan\15566_UH.dwg



- LEGEND:**
- W --- PROPOSED WATER SERVICE
 - SAN --- PROPOSED SANITARY SERVICE
 - ST --- PROPOSED STORM SEWER
 - E --- PROPOSED ELECTRICAL SERVICE
 - T --- PROPOSED TELEPHONE SERVICE
 - G --- PROPOSED GAS SERVICE
 - --- PROPOSED DRAIN TILE
 - PROPOSED STORM INLET
 - PROPOSED STORM MANHOLE
 - PROPOSED SANITARY MANHOLE

GENERAL NOTES:

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5. ALL UTILITIES WITHIN 5 FEET OF PAVED AREAS SHALL REQUIRE GRANULAR BACKFILL. SLURRY BACKFILL IS REQUIRED FOR ALL WORK IN PUBLIC RIGHT OF WAY.
6. PRIVATE STORM INLETS IN PAVEMENT SHALL REQUIRE DRAIN TILE STUBS OF 10 FEET IN TWO DIRECTIONS FOR SUBDRAINAGE. RIM GRADE FOR STORM INLETS IN CURB AND GUTTER ARE FLOW LINE GRADES.
7. WORK IN PUBLIC RIGHT OF WAY SHALL FOLLOW MATERIAL AND INSTALLATION REQUIREMENTS PER MUNICIPAL AND/OR COUNTY.
8. PRIVATE STORM SEWER 12-INCH DIAMETER OR LARGER SHALL BE HDPE. BELOW 12-INCH DIAMETER SHALL BE PVC SDR-35 ASTM D3034. PRIVATE WATER MAIN SHALL BE CLASS 150 DR 18 PVC CONFORMING TO AWWA C-900. PRIVATE SANITARY SEWER SHALL BE PVC SDR-35 ASTM D3034.
9. COORDINATE FINAL LOCATION AND DESIGN OF PRIVATE UTILITY SERVICES (ELECTRIC, GAS, PHONE, CABLE) WITH UTILITY COMPANIES. SERVICES ARE ONLY SHOWN AS REFERENCE.
10. IF PROJECT IS DESIGN BUILD MEP, THE GENERAL CONTRACTOR IS REQUIRED TO PROVIDE FINAL SEWER AND WATER DESIGN SHOWING LOCATION, INVERTS AND SIZES TO THE ENGINEER FOR FINAL REVIEW AND VERIFICATION PRIOR TO STARTING UNDERGROUND UTILITY CONSTRUCTION.



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MILW. AREA 259-1181

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Scale:
1" = 30'

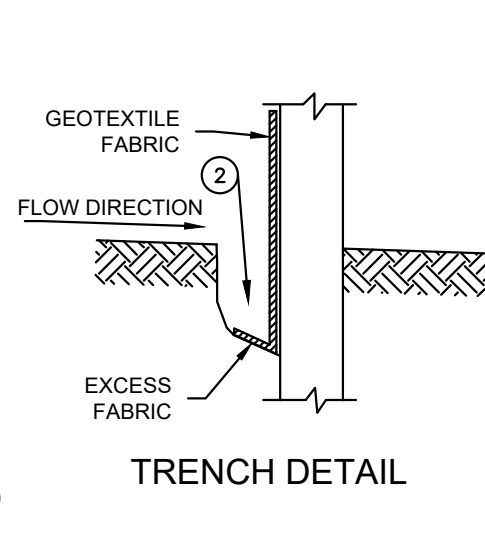
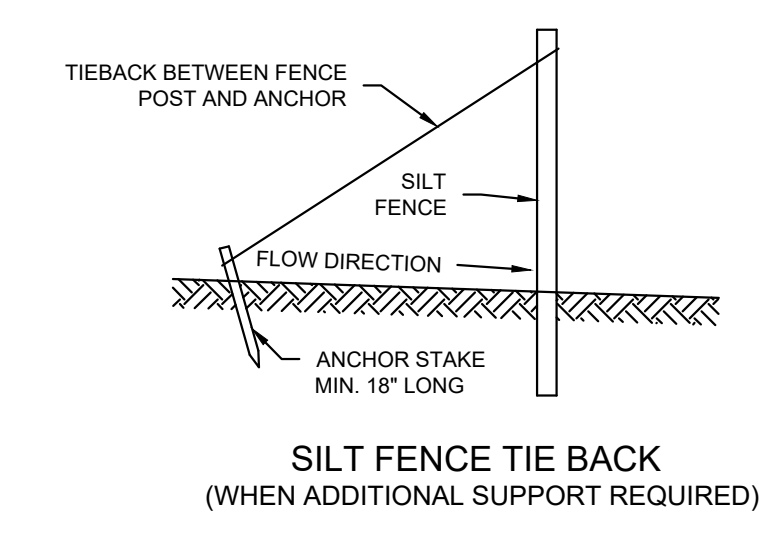
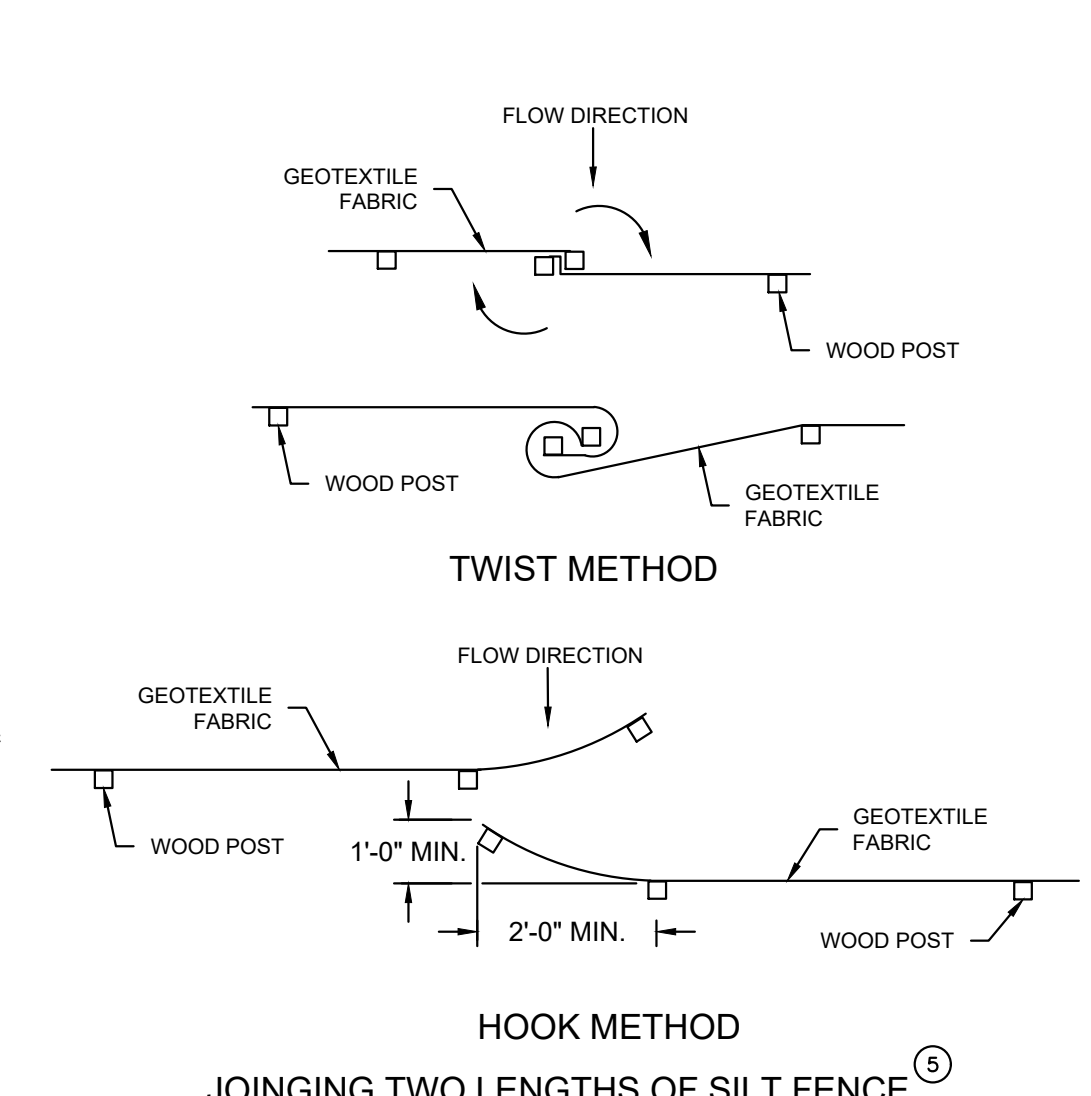
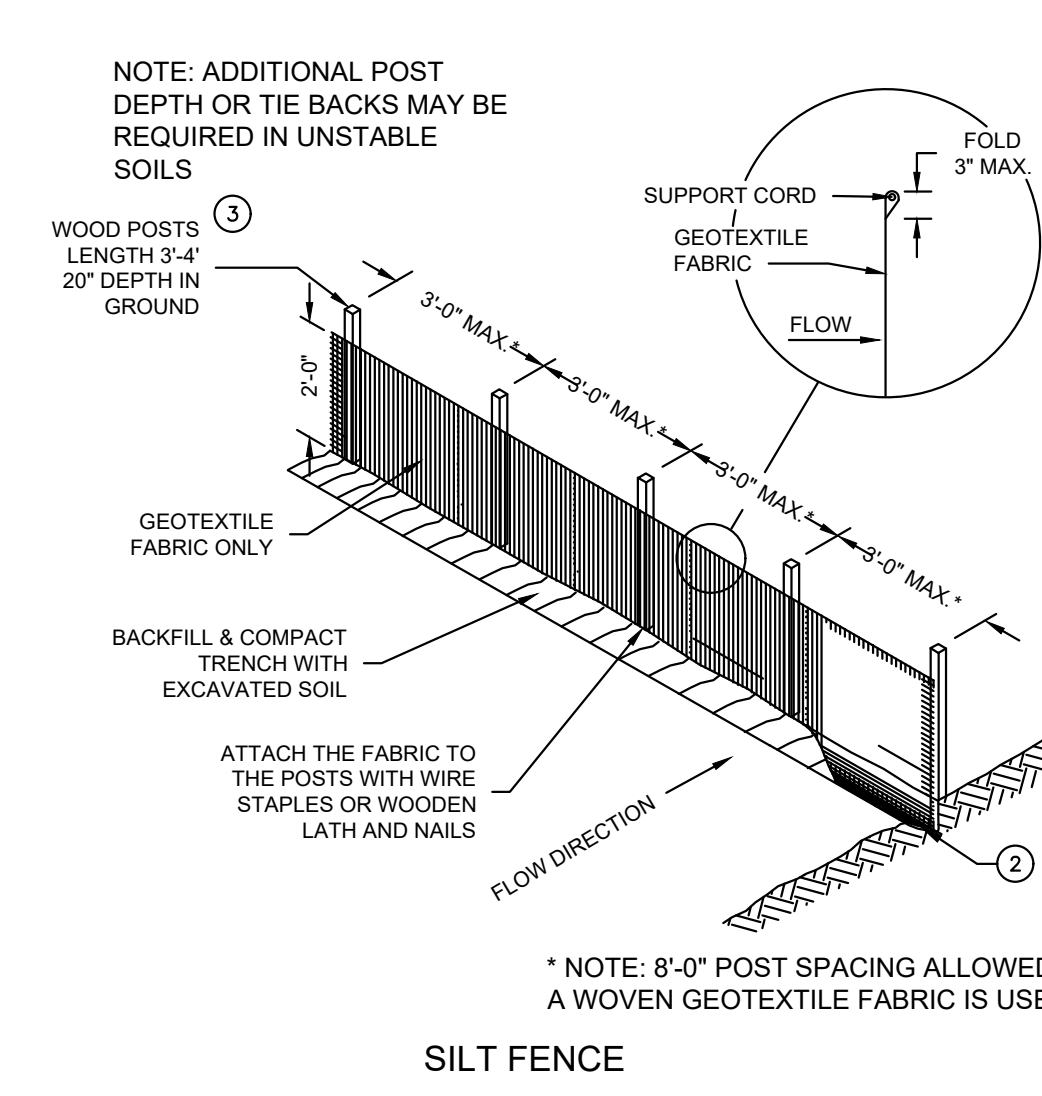
Revisions:

No.	Date	Description

Date:
07/14/2017

Project No:
170025.00

Sheet No:



A SILT FENCE: WDNR TS-1056
NOT TO SCALE

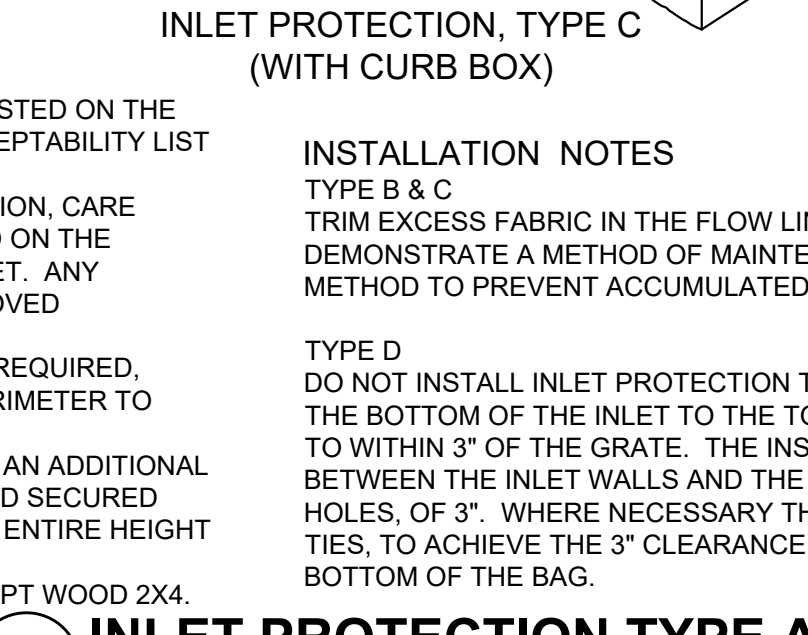
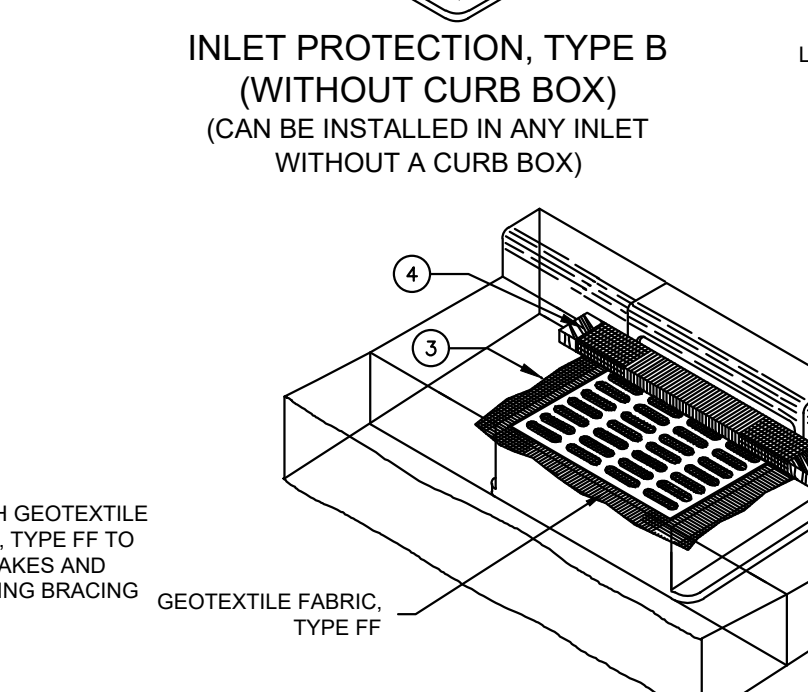
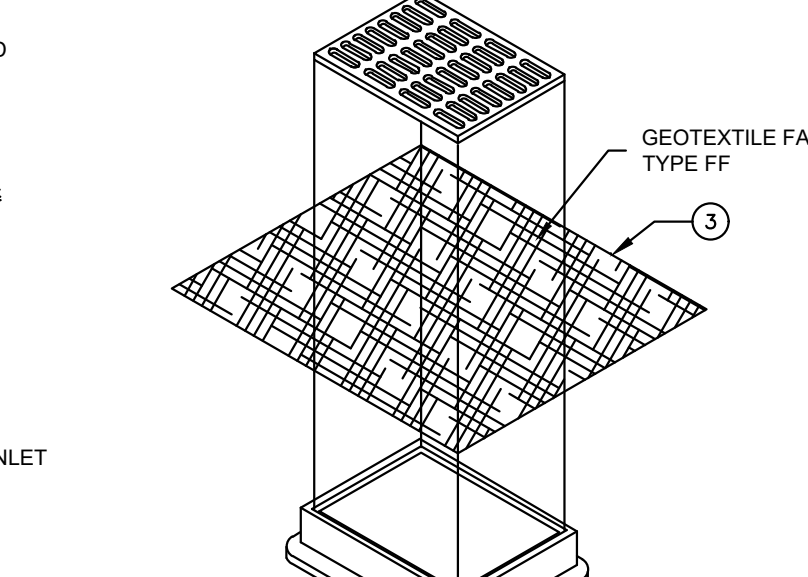
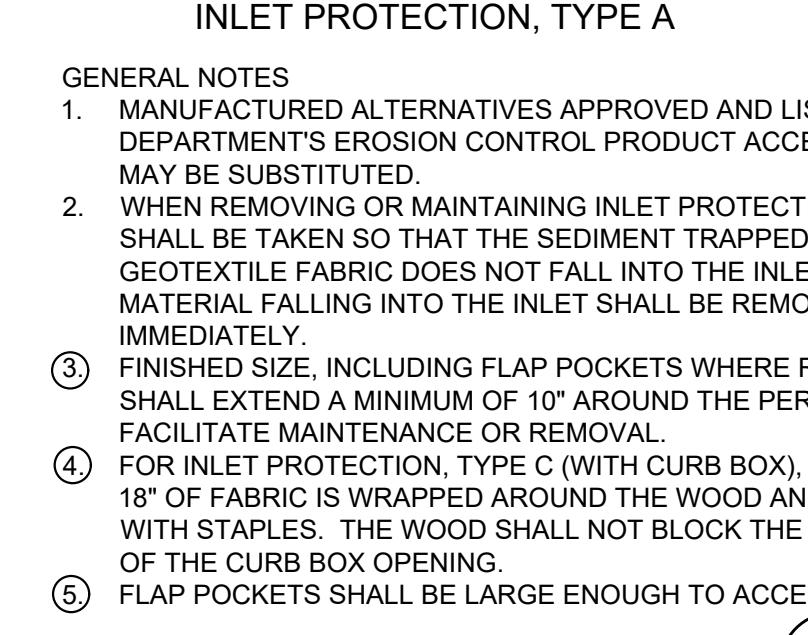
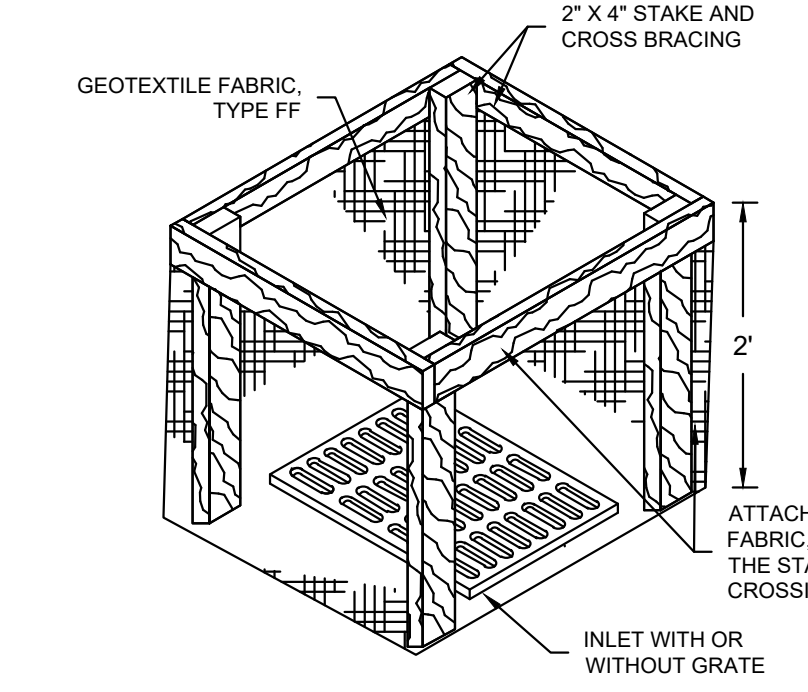
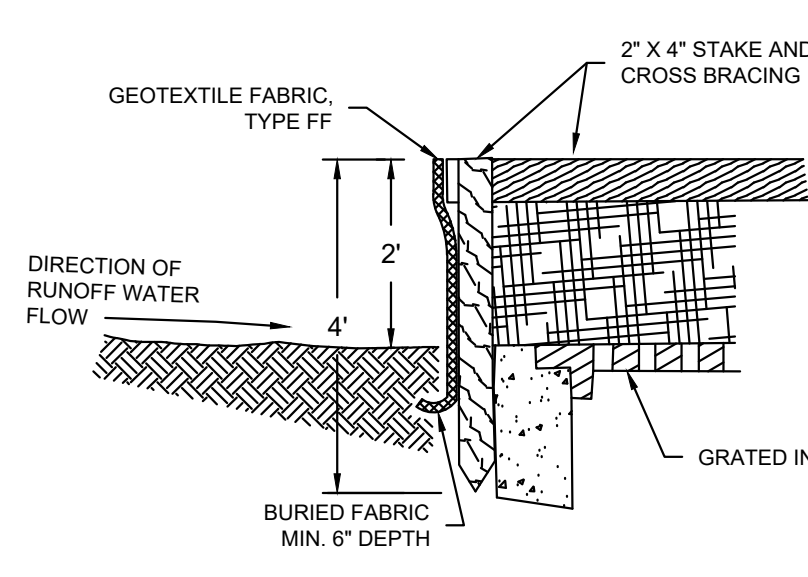
GENERAL NOTES
1. HORIZONTAL BRACE REQUIRED WITH 2"x4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC.
3. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
4. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1-1/2" X 1-1/2" OF OAK OR HICKORY.
5. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
6. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ON THE FOLLOWING TWO METHODS: A) OVERLAP THE END POSTS AND TWIST OR ROTATE, AT LEAST 180 DEGREES. B) HOOK THE END OF EACH SILT FENCE LENGTHS.

GENERAL NOTES
SILT FENCE SHALL CONFORM TO WDNR CONSERVATION PRACTICE STANDARD #1056
THIS DRAWING IS BASED ON WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD DETAIL DRAWING 8 E 9-6

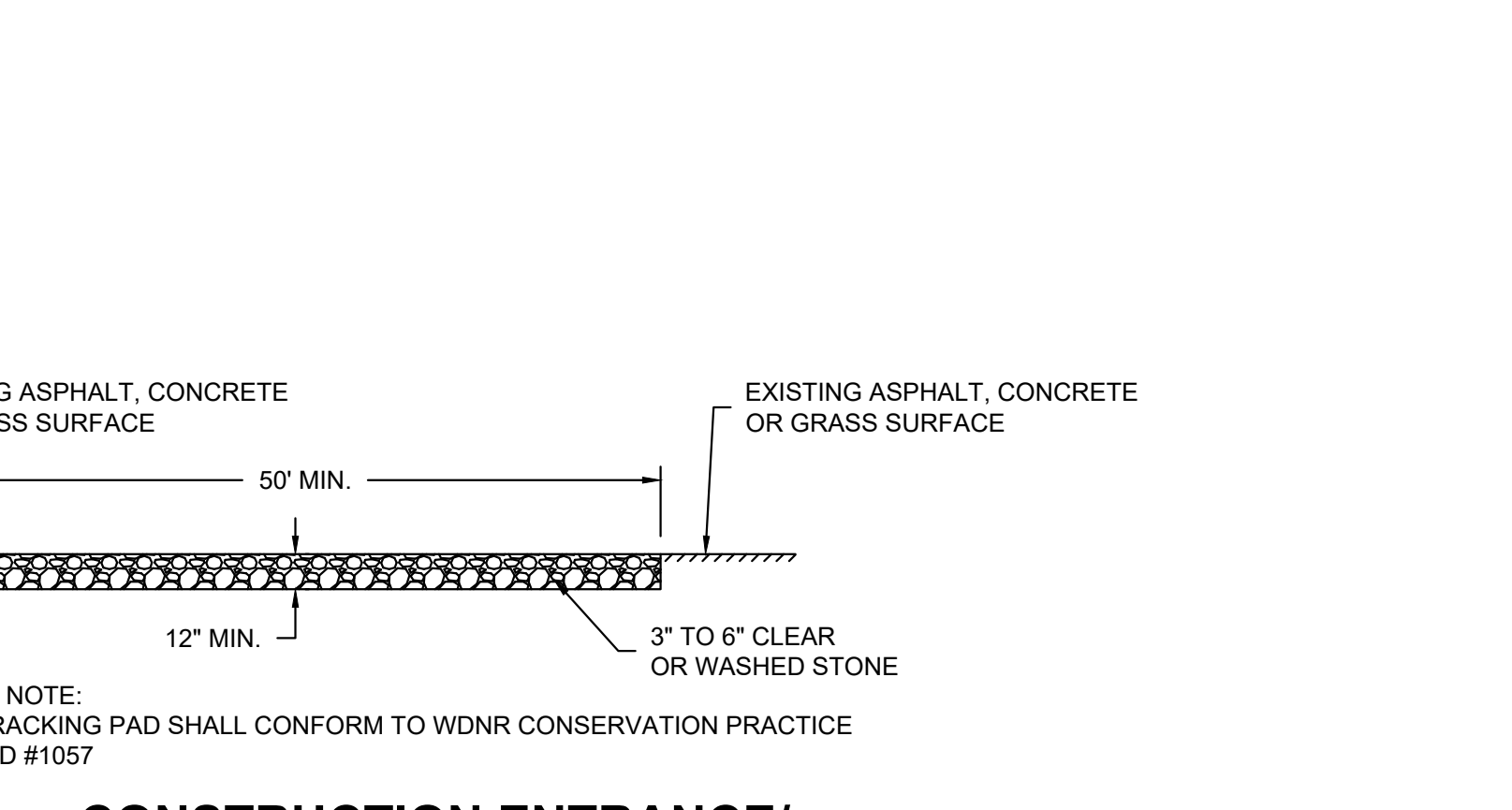
- GENERAL NOTES**
- MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.
 - WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.
 - FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
 - FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
 - FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2x4.

EROSION CONTROL NOTES:

- CONSTRUCTION SITE EROSION CONTROL AND SEDIMENTATION CONTROL SHALL COMPLY WITH THE REQUIREMENTS OF THE LOCAL MUNICIPALITY AND SHALL EMPLOY EROSION CONTROL METHODS AS SHOWN AND SPECIFIED IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARDS.
- ALL EROSION CONTROL MEASURES SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION AFTER A RAINFALL OF 0.5 INCHES OR MORE, BUT NO LESS THAN ONCE EVERY WEEK. MAINTENANCE OF ALL EROSION CONTROL STRUCTURES SHALL BE PROVIDED TO INSURE INTENDED PURPOSE IS ACCOMPLISHED. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP AND REMOVAL OF ALL SEDIMENT WHEN LEAVING PROPERTY. EROSION CONTROL MEASURES MUST BE IN WORKING CONDITION AT END OF EACH WORK DAY. DOCUMENT AND MAINTAIN RECORDS OF INSPECTIONS IN ACCORDANCE WITH WDNR NR126 REQUIREMENTS.
- SILT FENCE SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS. SEDIMENT DEPOSITS SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN DEPOSITS REACH A DEPTH OF 6 INCHES. THE SILT FENCE SHALL BE REPAIRED OR REPLACED AS NECESSARY TO MAINTAIN A BARRIER.
- FILTER FABRIC SHALL BE INSTALLED BENEATH INLET COVERS TO TRAP SEDIMENT PER INLET PROTECTION DETAIL IN THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS.
- EROSION CONTROL MEASURES SHALL BE MAINTAINED ON A CONTINUING BASIS UNTIL SITE IS FULLY STABILIZED.
- PERIODIC STREET SWEEPING SHALL BE COMPLETED TO MAINTAIN ADJACENT STREETS FREE OF DUST AND DIRT.
- SILT FENCE SHALL BE INSTALLED IN HORSESHOE FASHION AROUND ANY TOPSOIL AND FILL STOCKPILES.
- SITE DEWATERING. WATER PUMPED FROM THE SITE SHALL BE TREATED BY SEDIMENT BASINS OR OTHER APPROPRIATE MEASURES SPECIFIED IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARDS. WATER MAY NOT BE DISCHARGED IN A MANNER THAT CAUSES EROSION OF THE SITE, ADJACENT SITES, OR RECEIVING CHANNELS.
- WASTE AND MATERIAL DISPOSAL. ALL WASTE AND UNUSED BUILDING MATERIALS (INCLUDING GARBAGE, DEBRIS, CLEANING WASTES, WASTEWATER, TOXIC MATERIALS, OR HAZARDOUS MATERIALS) SHALL BE PROPERLY DISPOSED AND NOT ALLOWED TO BE CARRIED OFF-SITE BY RUNOFF OR WIND.
- TRACKING. EACH SITE SHALL HAVE GRAVELED ROADS, ACCESS DRIVES AND PARKING AREAS OF SUFFICIENT WIDTH AND LENGTH TO PREVENT SEDIMENT FROM BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS. ANY SEDIMENT REACHING A PUBLIC OR PRIVATE ROAD SHALL BE REMOVED BY STREET CLEANING, TO THE SATISFACTION OF THE CITY OF MILWAUKEE, BEFORE THE END OF EACH WORKDAY. FLUSHING MAY NOT BE USED UNLESS SEDIMENT WILL BE CONTROLLED BY A SEDIMENT BASIN OR PRACTICE SPECIFIED IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARDS. NOTIFY MUNICIPALITY OF ANY CHANGES IN STABILIZED CONSTRUCTION ENTRANCE LOCATION.
- SEDIMENT CLEANUP. ALL OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF A STORM EVENT SHALL BE CLEANED UP BY THE END OF THE NEXT WORKDAY. ALL OTHER OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE CLEANED UP BY THE END OF THE WORKDAY.
- ALL DISTURBED GROUND LEFT INACTIVE FOR SEVEN OR MORE DAYS SHALL BE STABILIZED BY TEMPORARY OR PERMANENT SEEDING, MULCHING, SODDING, COVERING WITH TARPS, OR EQUIVALENT PRACTICE FOUND IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARD. IF TEMPORARY SEEDING IS USED, A PERMANENT COVER SHALL ALSO BE REQUIRED AS PART OF THE FINAL SITE STABILIZATION. SEEDING OR SODDING SHALL BE REQUIRED AS PART OF THE FINAL SITE STABILIZATION.
- SOIL OR DIRT STORAGE PILES SHALL BE LOCATED A MINIMUM OF TWENTY-FIVE FEET FROM ANY DOWNSLOPE ROAD, LAKE, STREAM, WETLAND, OR DRAINAGE CHANNEL. STRAW BALE OR FILTER FABRIC FENCES SHALL BE PLACED ON THE DOWN SLOPE SIDE OF THE PILES. IF REMAINING FOR MORE THAN THIRTY DAYS, PILES SHALL BE STABILIZED BY MULCHING, VEGETATIVE COVER, TARPS OR OTHER MEANS.
- WHEN THE DISTURBED AREA HAS BEEN STABILIZED BY PERMANENT VEGETATION OR OTHER MEANS, TEMPORARY PRACTICES, SUCH AS FILTER FABRIC FENCES, STRAW BALES, SEDIMENT AND SEDIMENT TRAPS, FOUND IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARDS SHALL BE REMOVED.
- NOTIFY THE LOCAL MUNICIPALITY HAVING JURISDICTION WITHIN TWO WORKING DAYS OF COMMENCING ANY LAND DEVELOPMENT OR LAND DISTURBING ACTIVITY.
- OBTAIN PERMISSION FROM THE LOCAL MUNICIPALITY HAVING JURISDICTION PRIOR TO MODIFYING THE EROSION CONTROL PLAN.
- REPAIR ANY SILTATION OR EROSION DAMAGE TO ADJOINING SURFACES AND DRAINAGE WAYS RESULTING FROM LAND DEVELOPMENT OR LAND DISTURBING ACTIVITIES.
- KEEP A COPY OF THE EROSION CONTROL PLAN ON SITE.
- CONTRACTOR SHALL, TO THE EXTENT POSSIBLE, MINIMIZE DISTURBANCE OF EXISTING VEGETATION DURING CONSTRUCTION.
- CONTRACTOR SHALL, TO THE EXTENT POSSIBLE, MINIMIZE COMPACTION OF TOPSOIL AND PRESERVE TOPSOIL IN GREENSPACE AREAS.
- WASH WATER FROM VEHICLES AND WHEEL WASHING SHALL BE CONTAINED AND TREATED PRIOR TO DISCHARGE.
- CONTRACTOR SHALL MAINTAIN SPILL KITS ON-SITE.
- PERMANENT TURF SEEDING OF DISTURBED AREA MUST OCCUR PRIOR TO SEPTEMBER 15TH. IF ADEQUATE TIME IS NOT AVAILABLE TO APPLY PERMANENT SEEDING PRIOR TO SEPTEMBER 15, THEN DISTURBED AREAS SHALL BE TEMPORARILY SEEDED WITH AN ANNUAL RYE GRASS PER WDNR TECHNICAL STANDARD 1059. WHERE THE TEMPORARY SEEDING MUST OCCUR PRIOR TO OCTOBER 15TH.
- IF TEMPORARY SEEDING IS NOT COMPLETED BY OCTOBER 15TH, APPLY SOIL STABILIZERS AND DORMANT SEED TO DISTURBED AREA PER WDNR TECHNICAL STANDARD 1050. INSPECT ANIONIC PAM APPLICATION AT A MINIMUM FREQUENCY OF EVERY TWO MONTHS AND REAPPLY AS NECESSARY.

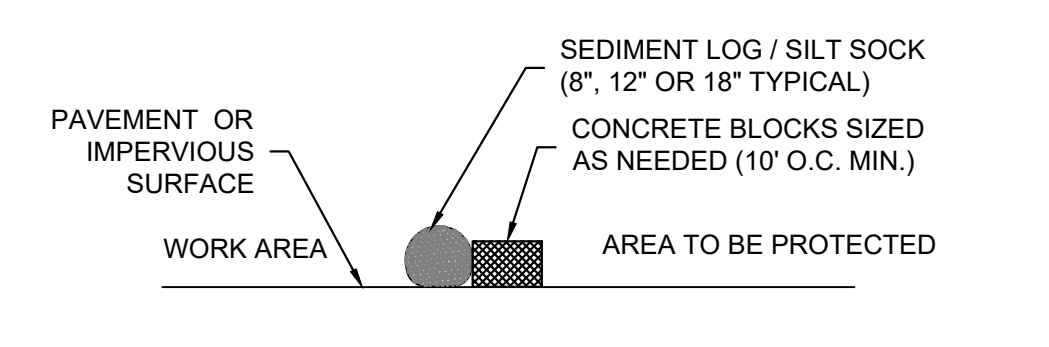


B INLET PROTECTION TYPE A, B, C, AND D: WDNR TS-1060
NOT TO SCALE

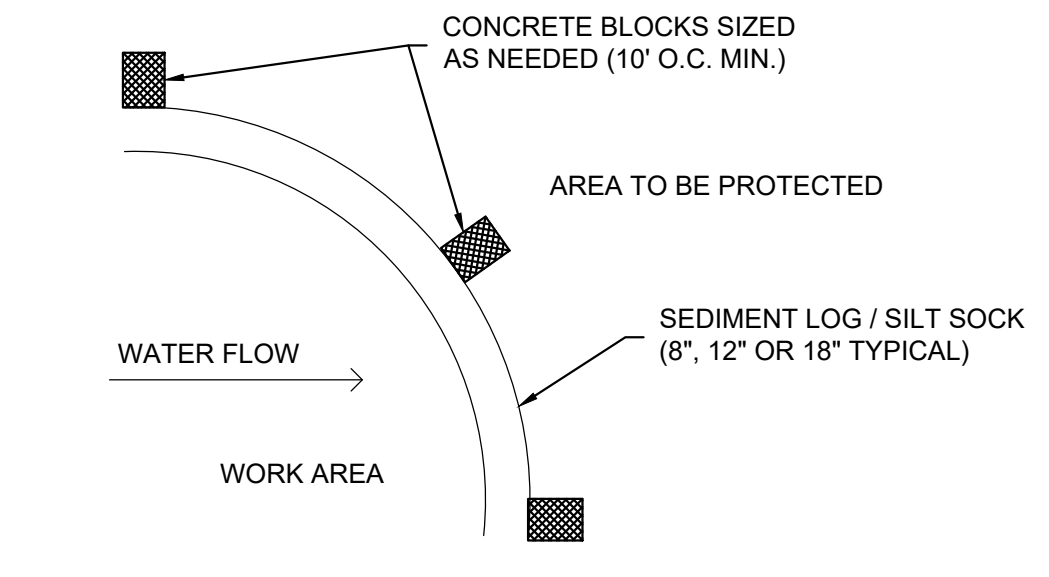


C CONSTRUCTION ENTRANCE/EXIT DETAIL: WDNR TS-1057
NOT TO SCALE

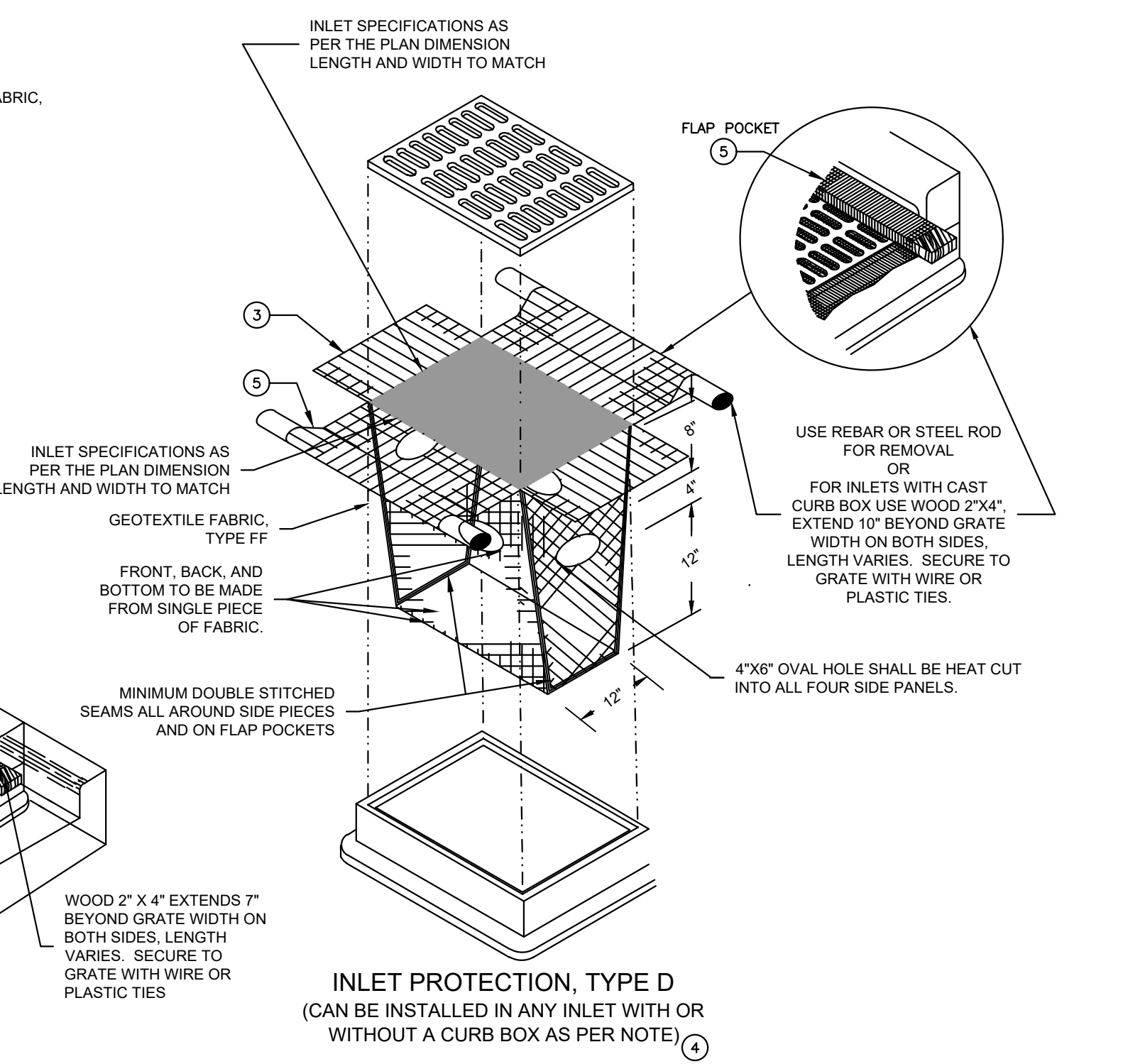
- CONSTRUCTION SEQUENCE FOR EROSION CONTROL INCLUDES:**
- INSTALL STABILIZED CONSTRUCTION ENTRANCE.
 - INSTALL SILT FENCING AND INLET PROTECTION.
 - STRIP TOPSOIL FROM STORM DRY BASIN LOCATION AND STOCKPILE.
 - CONSTRUCT STORM DRY BASIN AND INSTALL TEMPORARY OUTLET AND EMERGENCY OVERFLOW. BASIN IS TO BE USED AS A SEDIMENTATION BASIN DURING THE COURSE OF CONSTRUCTION. DO NOT INSTALL ENGINEERED SOIL UNTIL SITE IS STABILIZED.
 - INSTALL RIP-RAP AT STORM BIO-FILTRATION BASIN AS SHOWN ON THE PLANS.
 - STRIP TOPSOIL FROM REMAINDER OF SITE IN A PROGRESSIVE MANNER, AND STOCKPILE. PLACE SILT FENCE AROUND STOCKPILE(S).
 - PERFORM ROUGH SITE GRADING. STABILIZE FINISHED AREAS AS THE WORK PROGRESSES. USE EROSION MATTING WHERE CALLED FOR ON THE PLANS. PER WDNR TECHNICAL STANDARD 1059. AREAS THAT RECEIVE TEMPORARY SEEDING SHALL HAVE A MINIMUM TOPSOIL DEPTH OF 2 INCHES. AREAS THAT RECEIVE PERMANENT SEEDING SHALL HAVE A MINIMAL TOPSOIL DEPTH OF 4 INCHES.
 - PREPARE BUILDING PAD AND BEGIN FOUNDATIONS WORK FOR BUILDING.
 - INSTALL UTILITIES. INSTALL ANY ADDITIONAL INLET PROTECTION ON NEW STORM SEWER AND INSTALL RIP-RAP AT NEW STORM SEWER OUTFALLS.
 - PERFORM FINE SITE GRADING AND INSTALL STONE BASE(S).
 - REMOVE TEMPORARY OUTLET CONTROL STRUCTURE ON BASIN AND INSTALL PAVEMENTS.
 - LANDSCAPE AND STABILIZE REMAINING AREAS WITHIN 7 DAYS OF COMPLETION OF FINAL GRADING AND TOPSOILING.
 - PRIOR TO PLACING IN THE BIO-FILTRATION BASIN, THE ENGINEERED SOIL SHALL BE PREMIXED AND THE MOISTURE CONTENT SHALL BE LOW ENOUGH TO PREVENT CLUMPING AND COMPACTION DURING PLACEMENT.
 - REMOVE EROSION CONTROL MEASURES ONLY WHEN SITE IS FULLY STABILIZED.



SECTION NT S



PLAN
SEDIMENT LOG / SILT SOCK ON PAVEMENT DETAIL
NOT TO SCALE



INSTALLATION NOTES
TYPE B & C
TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE. THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.
TYPE D
DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30". MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE. THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

D EROSION MATTING: WDNR TS-1052
NOT TO SCALE

- PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
- BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF RECP'S EXTENDED 30 BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES / STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES / STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP'S.
- ROLL THE RECP'S (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES / STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES / STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
- THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP'S TYPE.
- CONSECUTIVE RECP'S SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP'S WIDTH. NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTH GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.

- NOTE:**
- EROSION MATTING SHALL CONFORM TO WDNR CONSERVATION PRACTICE STANDARD #1052.
 - INSTALL PER MANUFACTURERS SPECIFICATIONS.

D EROSION MATTING: WDNR TS-1052
NOT TO SCALE

DEVELOPER:

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Consultant:

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HEC Project Number: 150042.00
Consultant:

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GROUP
Single Source. Sound Solutions.
1300 West Canal Street Milwaukee, Wisconsin 53233
414.643.4200 414.643.4210 fax
www.thesigmagroup.com

Project:
The Waters II
Core & Shell
Location:
11011 W Park Place,
Milwaukee, WI
Key Plan:

Construction Documents

Sheet
Details

Scale:
1" = 30'

Revisions:

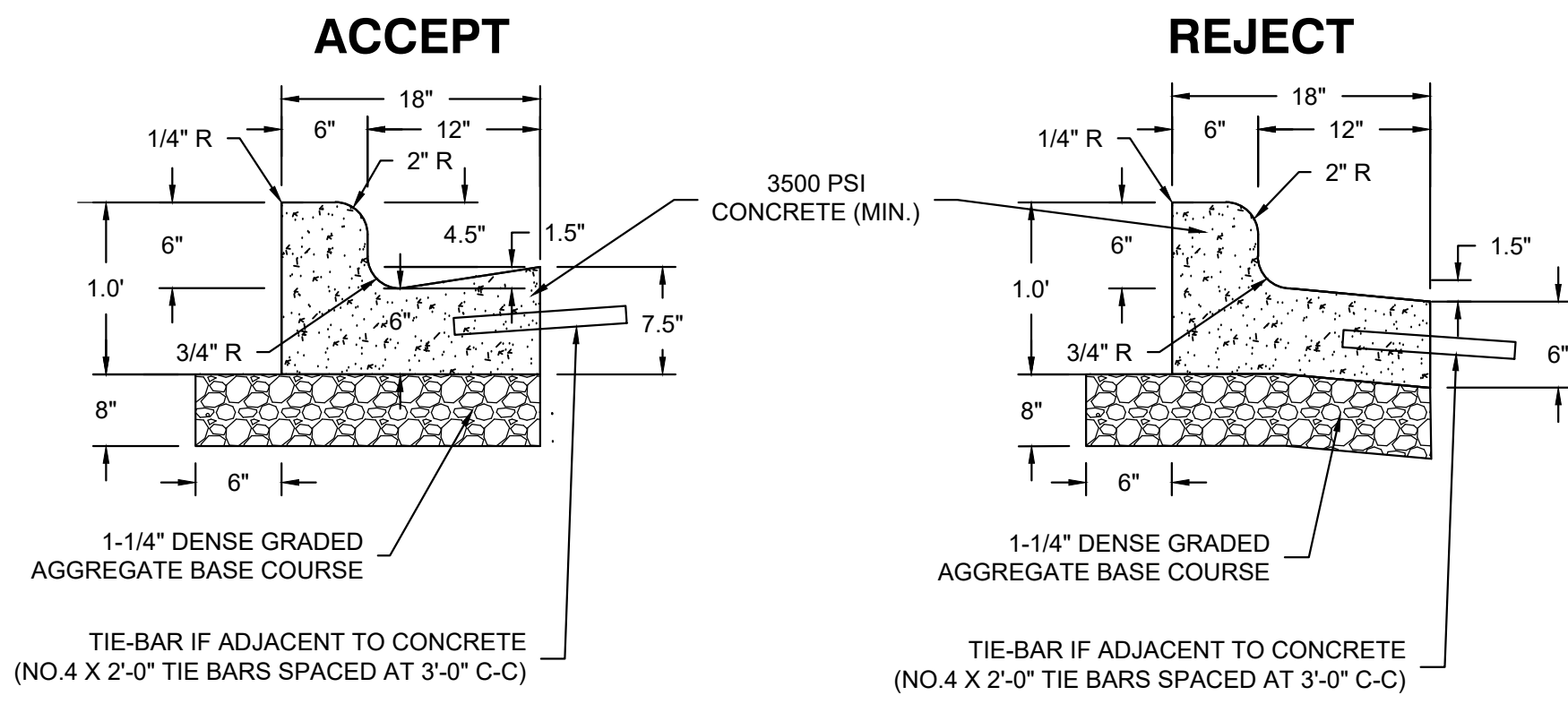
No.	Date	Description

Date:
07/14/2017

Project No:
170025.00

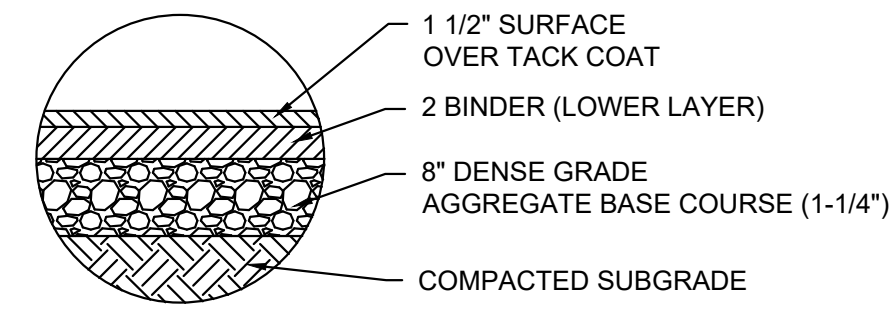
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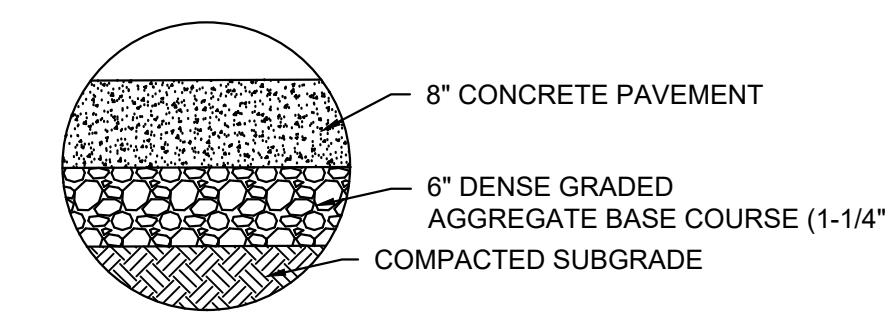


A 18" CONCRETE CURB & GUTTER SECTION

NOT TO SCALE

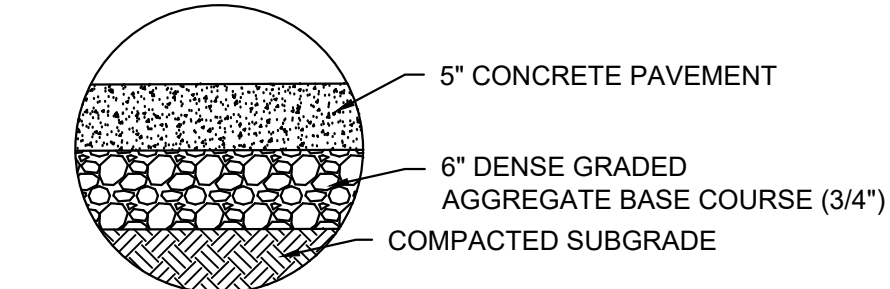


B ASPHALT PAVEMENT SECTION



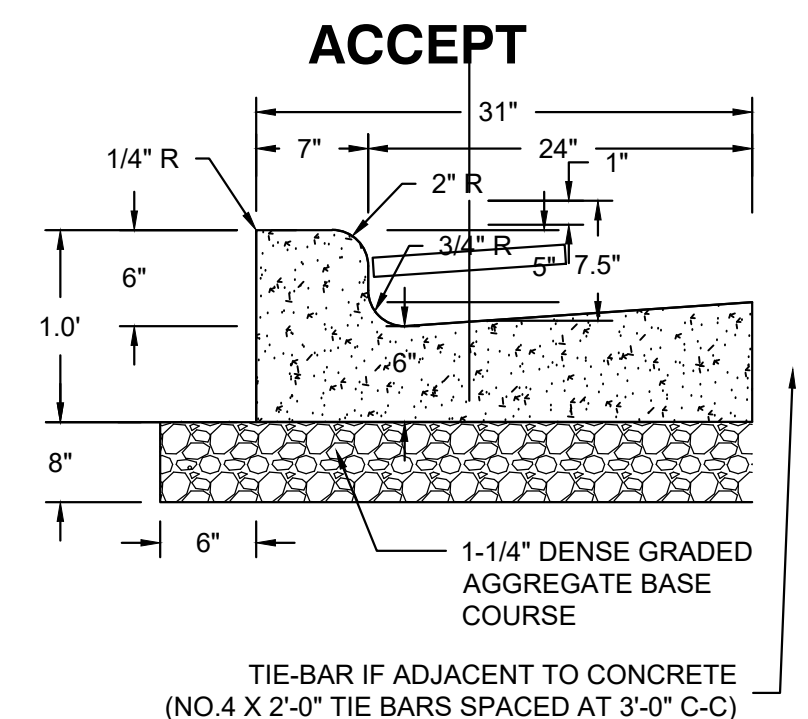
C CONCRETE PAVEMENT SECTION FOR TRASH ENCLOSURE

NOT TO SCALE



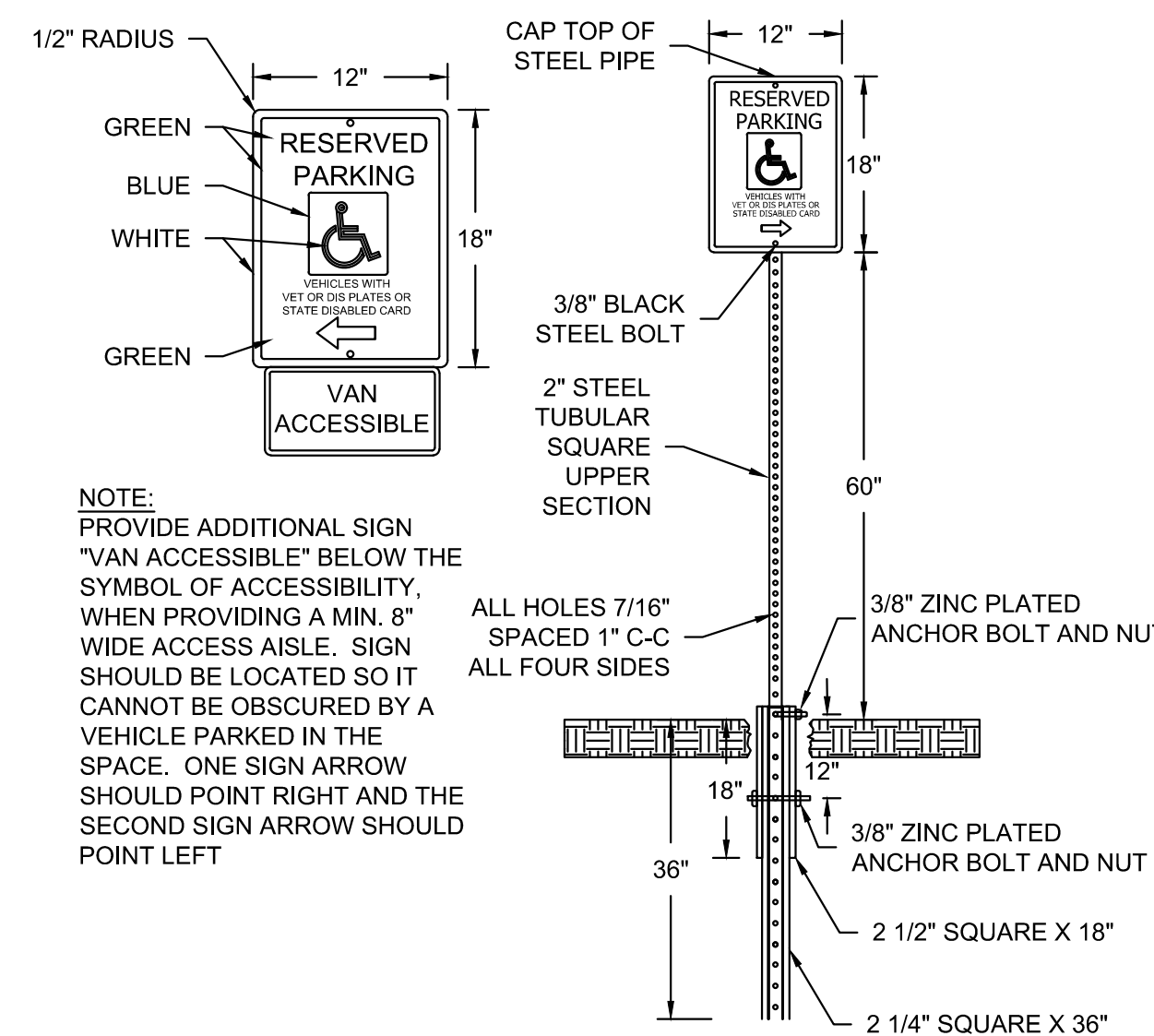
D CONCRETE SIDEWALK SECTION

NOT TO SCALE



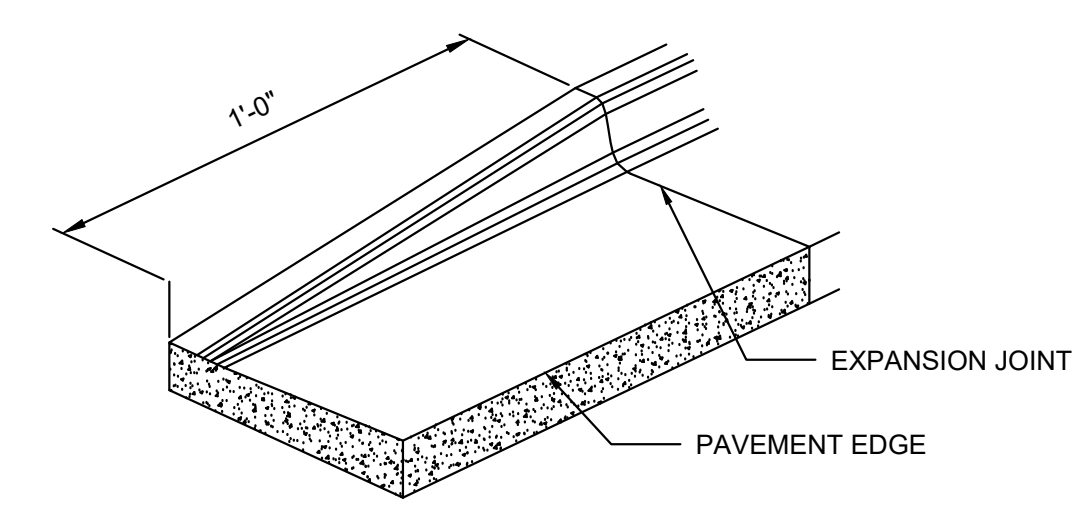
E 31" CONCRETE CURB & GUTTER SECTION (CITY OF MILWAUKEE)

NOT TO SCALE



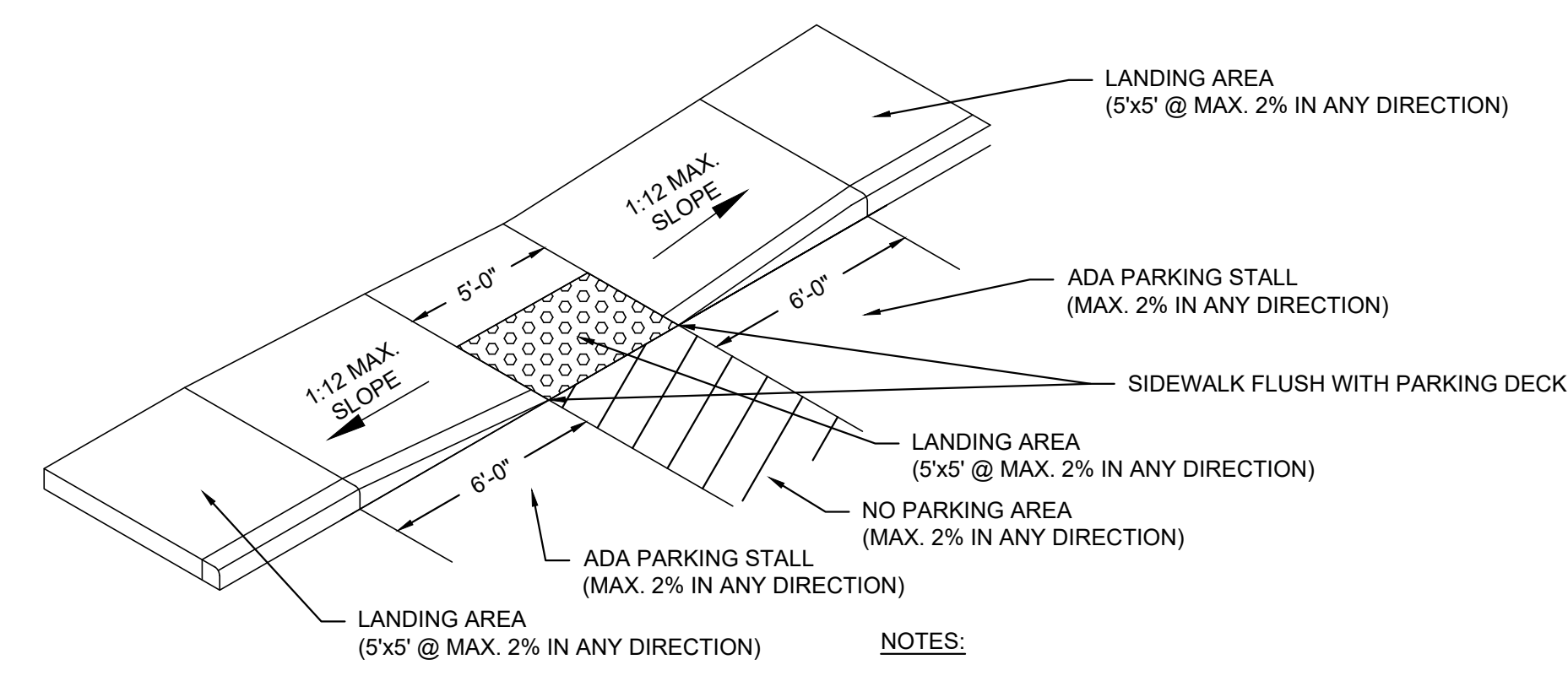
F HANDICAP SIGN & POST

NOT TO SCALE



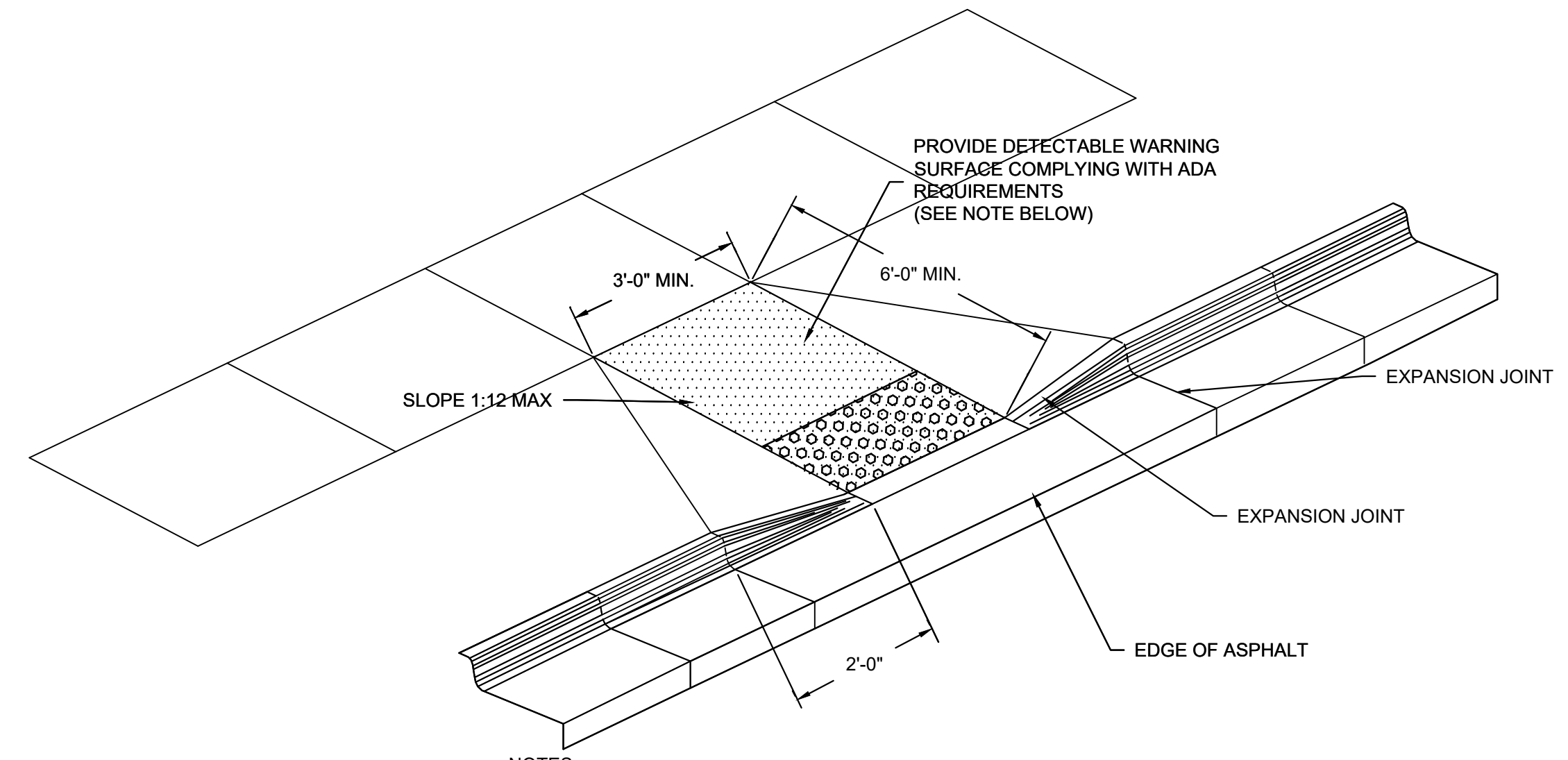
G 1" CURB TAPER

NOT TO SCALE



H ADA RAMP DETAIL (TYPE 1)

NOT TO SCALE



I ADA CONCRETE RAMP (TYPE 2)

NOT TO SCALE

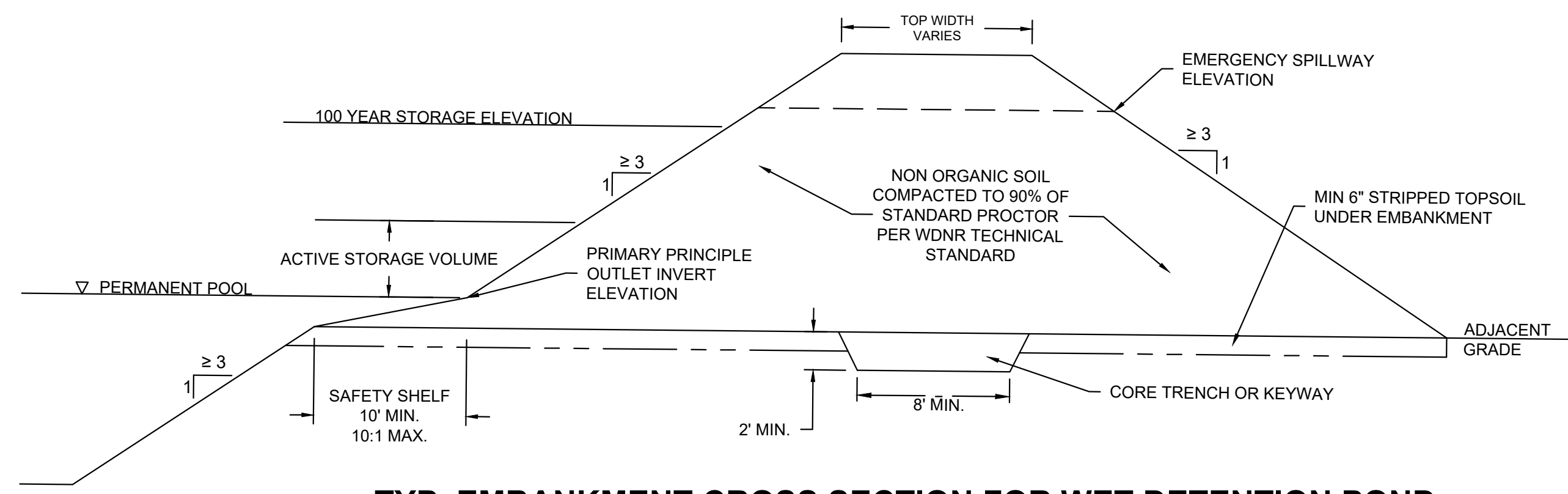
- NOTES:
- PUBLIC ADA RAMP SHALL BE CONSTRUCTED PER CITY OF MILWAUKEE STANDARDS.
 - CONTRACTOR TO VERIFY ADA RAMP DETAIL WITH CITY AND ADJUST AS NEEDED.
 - PROVIDE DETECTABLE WARNING CONSISTING OF RAISED TRUNCATED DOMES OF SIZE, SPACING AND CONTRAST REQUIRED BY ADA GUIDELINES.
 - DETECTABLE WARNINGS SHALL BE PER CITY STANDARDS.

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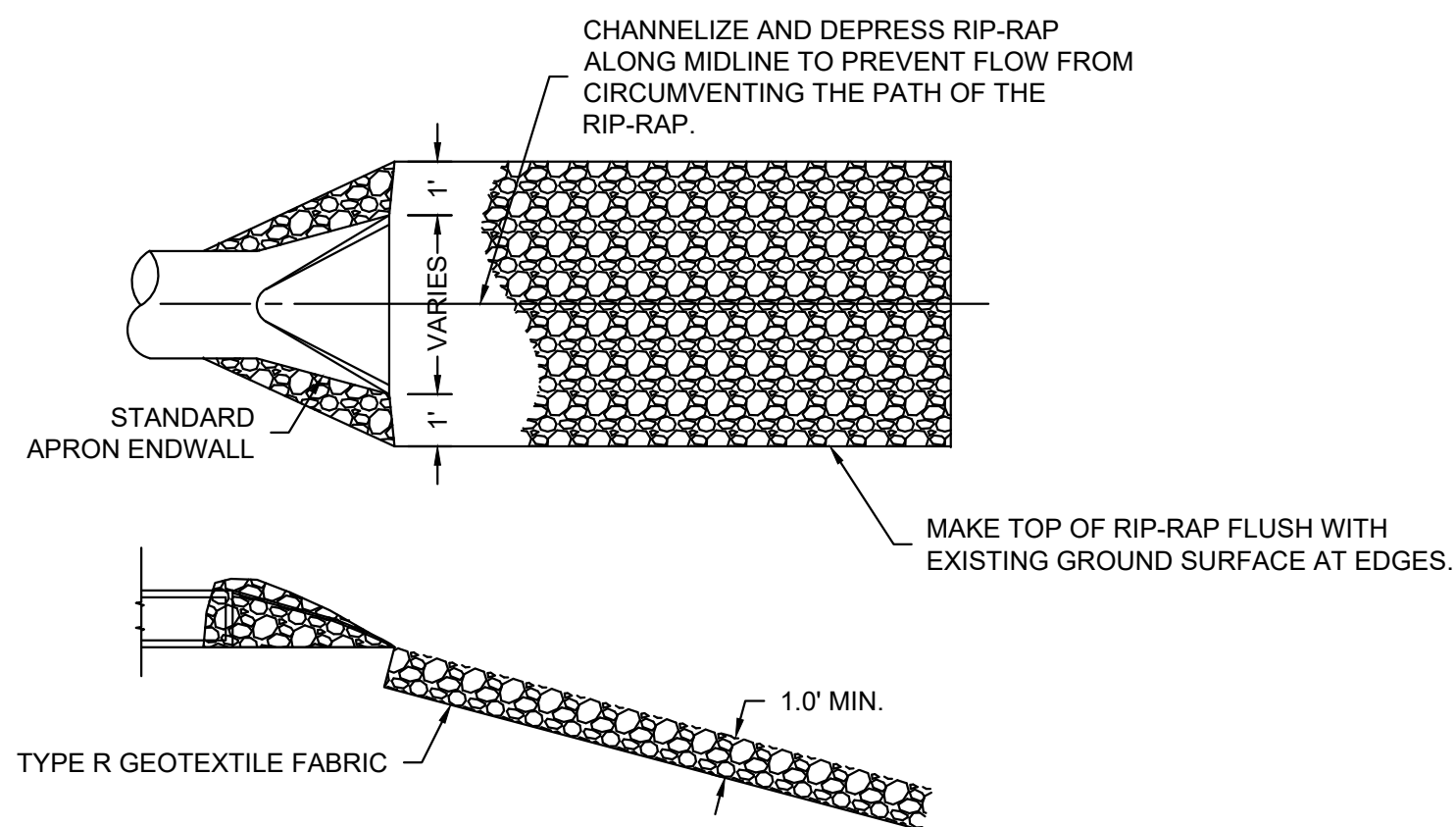
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1" = 30'

Revisions:

No.	Date	Description

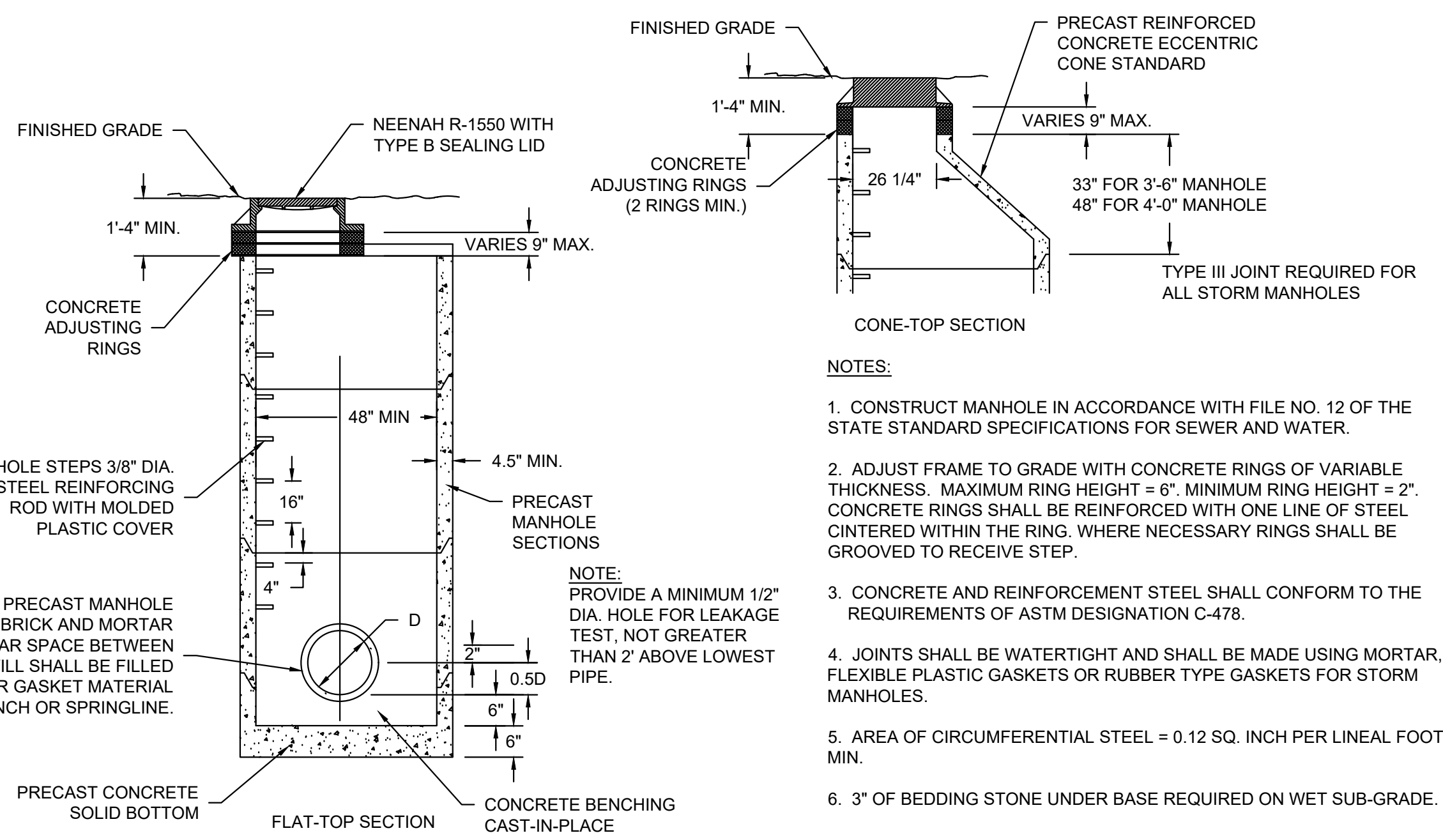


A TYP. EMBANKMENT CROSS SECTION FOR WET DETENTION POND
NOT TO SCALE



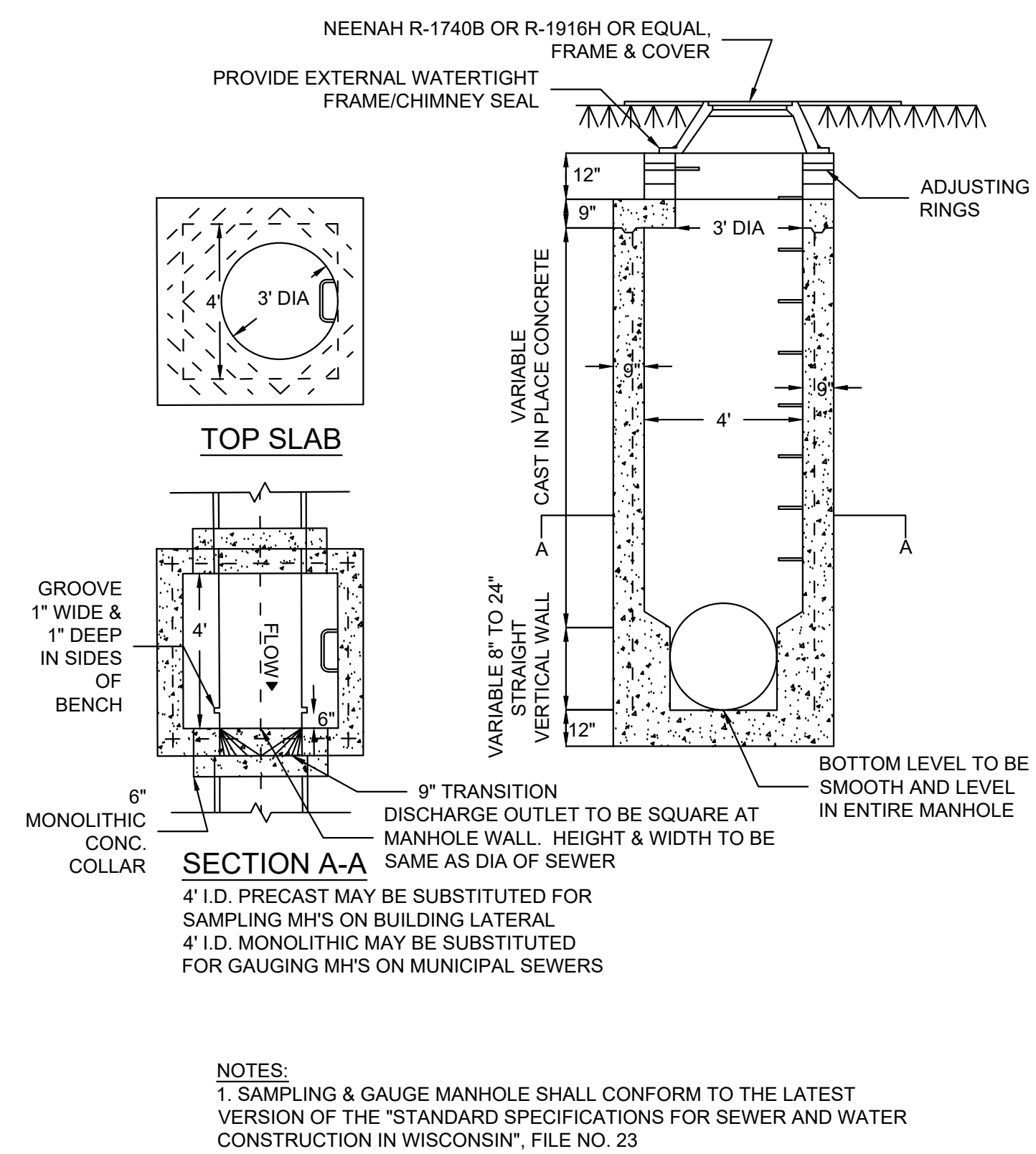
- NOTES:**
1. INSTALL RIPRAP WHERE SHOWN ON PLANS.
 2. FOR PERMANENT POOL (WET) DETENTION BASINS: EXTEND RIP-RAP FROM OUTFALL TO AT LEAST 5 FEET BEYOND THE NORMAL WATER LEVEL.
 3. INSTALL MEDIUM RIPRAP PER DOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
 4. INSTALL TYPE R GEOTEXTILE FABRIC PER DOT STANDARD SPECIFICATIONS PER HIGHWAY AND STRUCTURE CONSTRUCTION.
 5. WHERE RIP-RAP IS REQUIRED AT AN AREA PER PLAN, AND THERE IS NO OUTFALL PIPE, THE RIP-RAP SHALL BE PLACED A MINIMUM 6 FEET WIDE.

C RIP-RAP DISCHARGE APRON
NOT TO SCALE



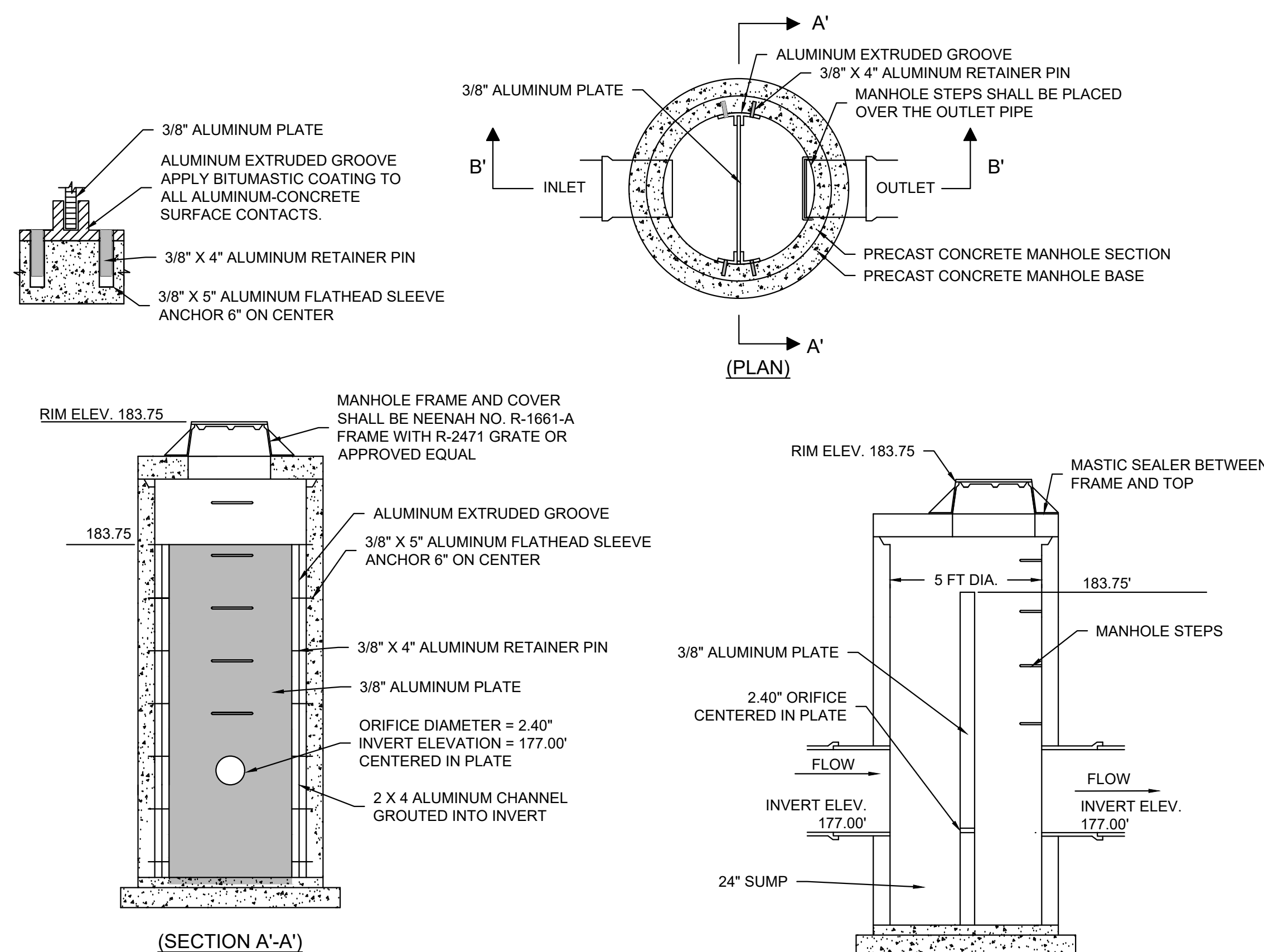
- NOTES:**
1. CONSTRUCT MANHOLE IN ACCORDANCE WITH FILE NO. 12 OF THE STATE STANDARD SPECIFICATIONS FOR SEWER AND WATER.
 2. ADJUST FRAME TO GRADE WITH CONCRETE RINGS OF VARIABLE THICKNESS. MAXIMUM RING HEIGHT = 6\"/>
 - 3. CONCRETE AND REINFORCEMENT STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION C-478.
 - 4. JOINTS SHALL BE WATERTIGHT AND SHALL BE MADE USING MORTAR, FLEXIBLE PLASTIC GASKETS OR RUBBER TYPE GASKETS FOR STORM MANHOLES.
 - 5. AREA OF CIRCUMFERENTIAL STEEL = 0.12 SQ. INCH PER LINEAL FOOT MIN.
 - 6. 3\"/>

D PRECAST STORM MANHOLE
NOT TO SCALE

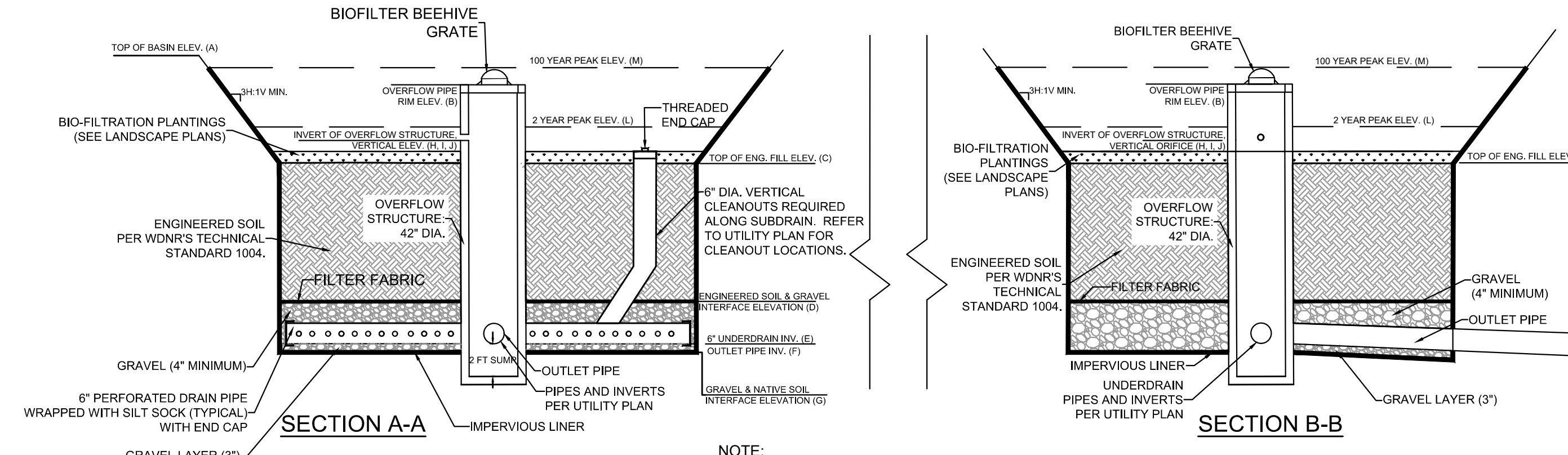


- NOTES:**
1. SAMPLING & GAUGE MANHOLE SHALL CONFORM TO THE LATEST VERSION OF THE \"STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN\", FILE NO. 23

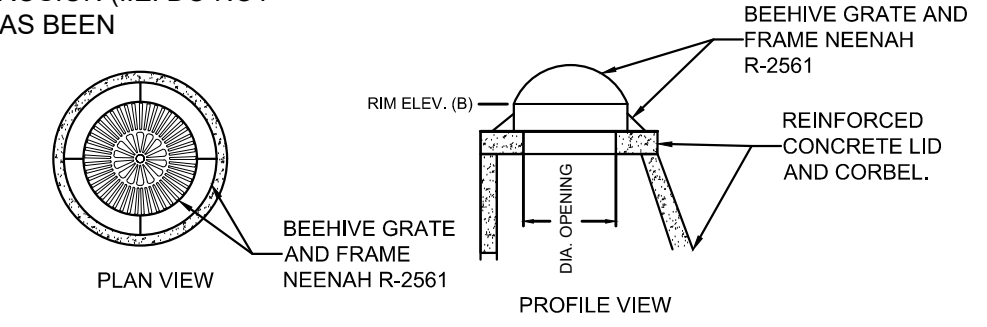
F SAMPLING & GAUGE MANHOLES
NOT TO SCALE



G OUTLET CONTROL MANHOLE
NOT TO SCALE



- NOTE:**
BIO-FILTRATION BASIN SHALL NOT BE BROUGHT ONLINE UNTIL AREA DRAINING TO THE BASIN HAS ACHIEVED 90% STABILIZATION FROM EROSION (I.E. DO NOT PLACE ENGINEERED SOIL UNTIL SITE HAS BEEN STABILIZED).

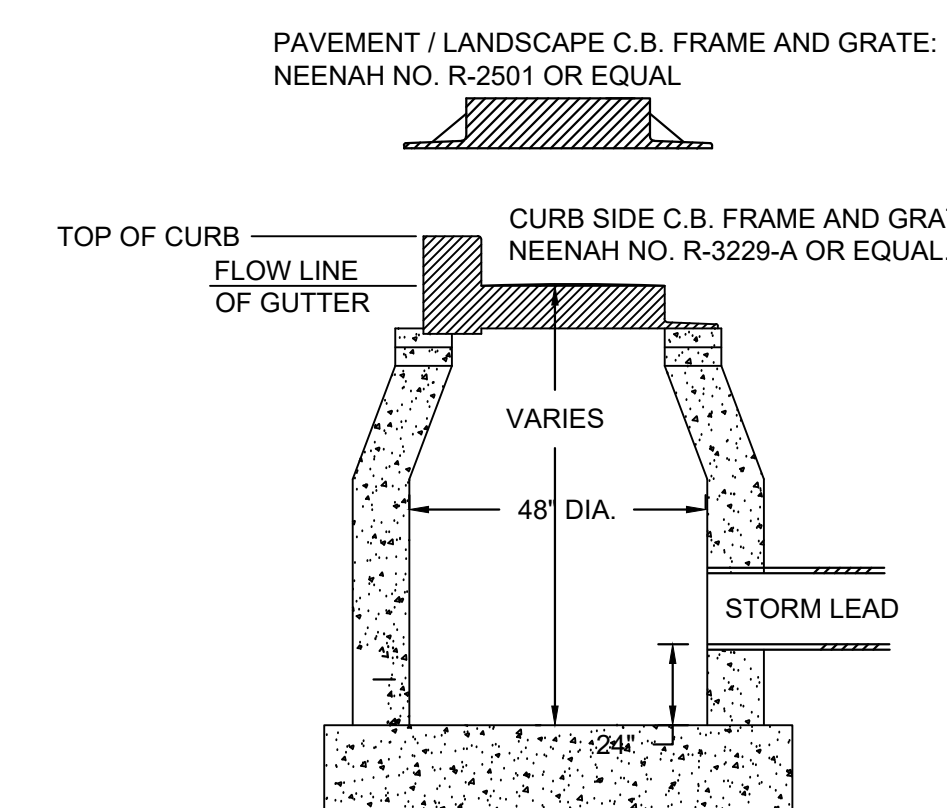


BIOFILTRATION AREA - GRATE DETAIL
NOT TO SCALE

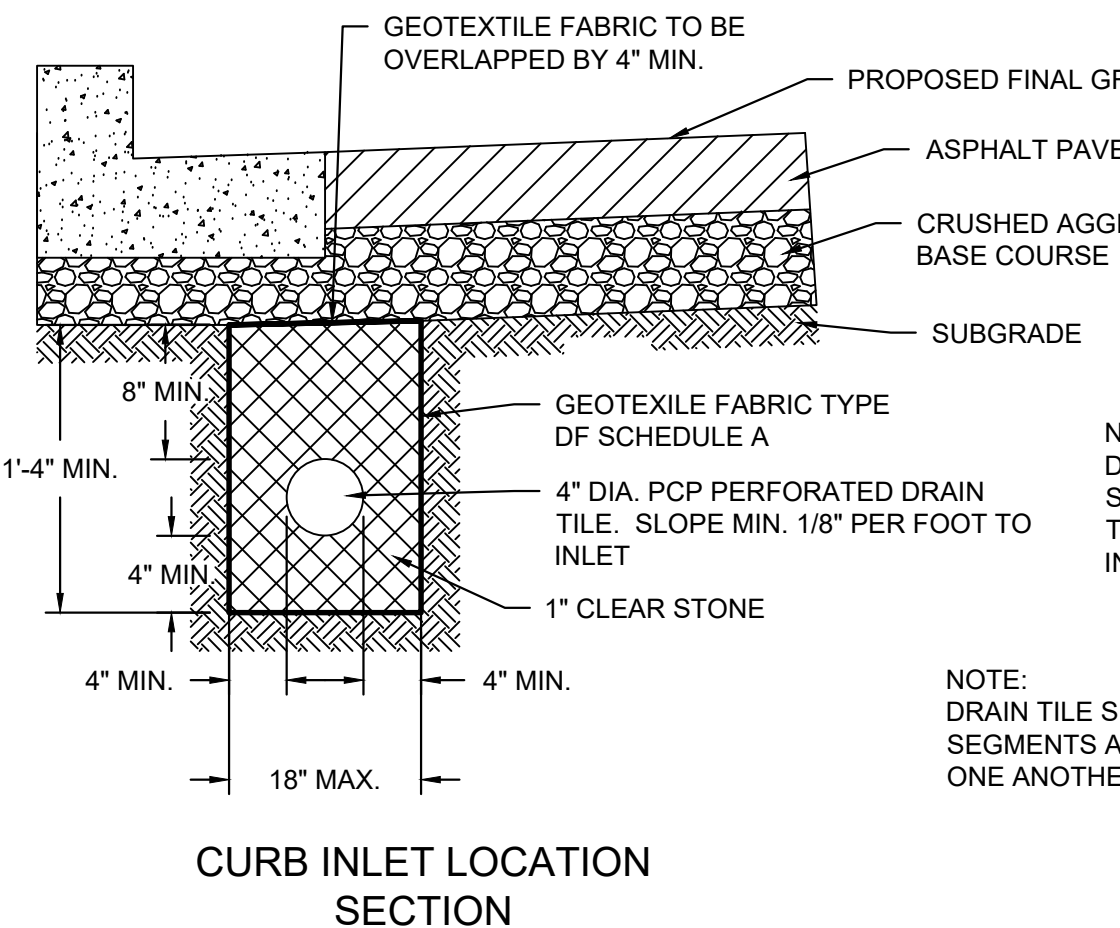
BIO-FILTRATION SUMMARY TABLE														
BIO-FILTRATION AREA	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	
BIO 1	182.91	182.00	180.00	176.00	176.00	24"	182.00	180.00	2.4"	180.00	1	182.50	180.29	181.22
	TOP OF POND (CURB FLOW LINE)	OVERFLOW RIM ELEVATION	TOP OF ENGINEERED FILL ELEVATION	ENGINEERED SOIL AND GRAVEL INTERFACE ELEVATION	6\"/>									

- NOTE:**
1. BIO-FILTRATION BASINS THAT HAVE MULTIPLE VERTICAL ORIFICES SHALL BE INSTALLED AT THE SAME ELEVATION AS IDENTIFIED IN THE TABLE.
 2. MULTIPLE VERTICAL ORIFICES SHALL HAVE A MINIMUM OF 12 INCHES HORIZONTAL SEPARATION.

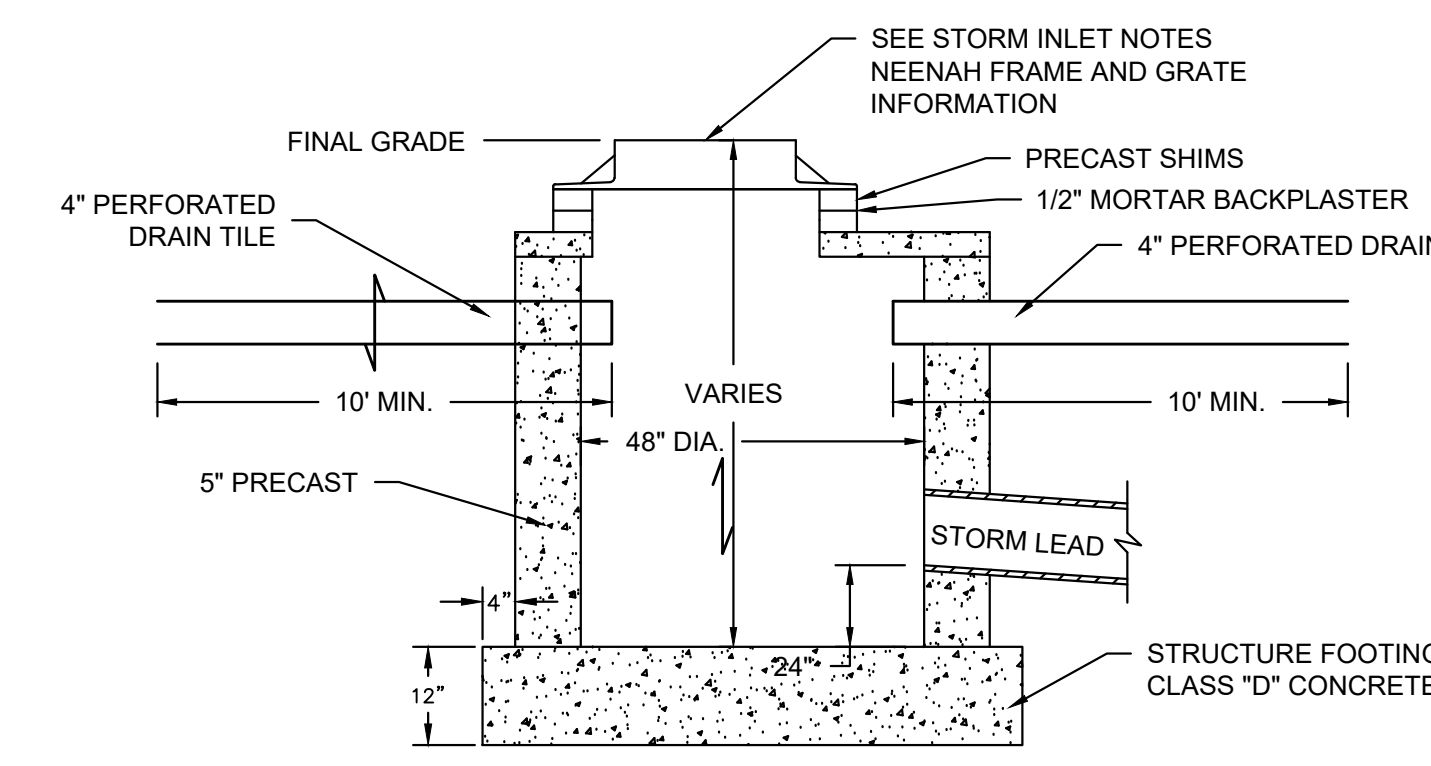
B BIO-FILTRATION BASIN
NOT TO SCALE



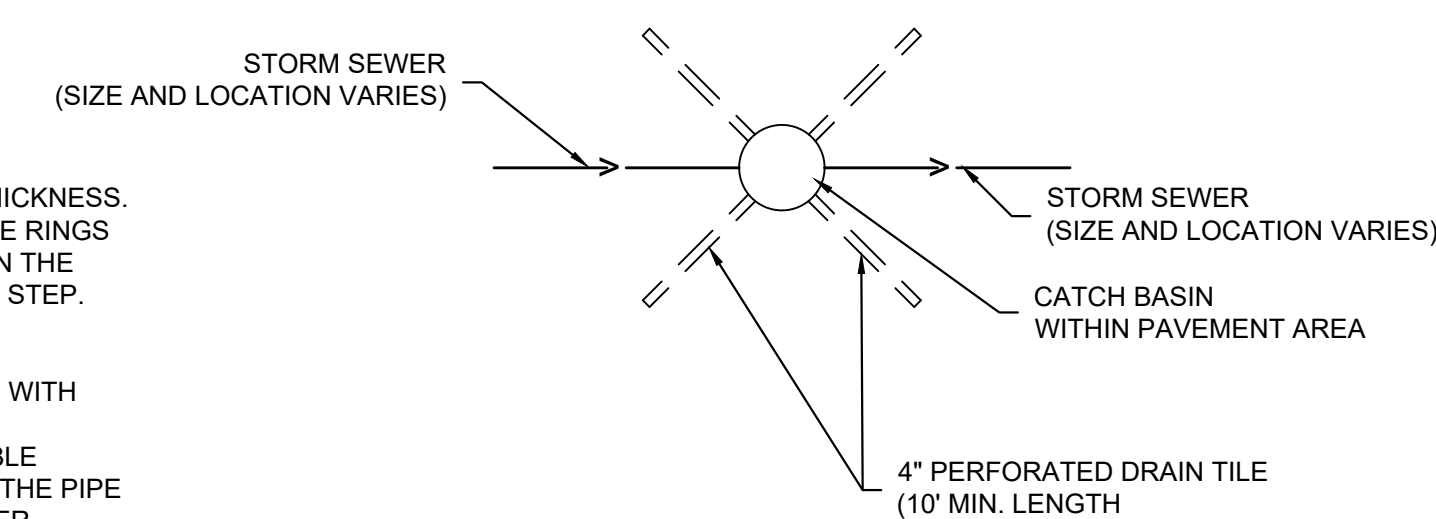
- NOTES:**
1. ADJUST FRAME TO GRADE WITH CONCRETE RINGS OF VARIABLE THICKNESS. MAXIMUM RING HEIGHT = 6\"/>
 - 2. CONCRETE AND REINFORCEMENT STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION C-478.
 - 3. SPACE BETWEEN PIPE AND PRECAST MANHOLE WALL TO BE FILLED WITH BRICK MORTARED IN PLACE EXCEPT THAT AN APPROVED FLEXIBLE WATERTIGHT PIPE TO MANHOLE SEAL IS REQUIRED FOR ALL FLEXIBLE SANITARY SEWER CONNECTIONS. THE ANNULAR SPACE BETWEEN THE PIPE AND MANHOLE WALL SHALL BE FILLED WITH FLEXIBLE BUTYL RUBBER GASKET MATERIAL BELOW SURFACE OF BENCH OR SPRINGLINE.
 - 4. AREA OF CIRCUMFERENTIAL STEEL = 0.12 SQ INCH PER LINEAL FOOT MIN.
 - 5. 3\"/>



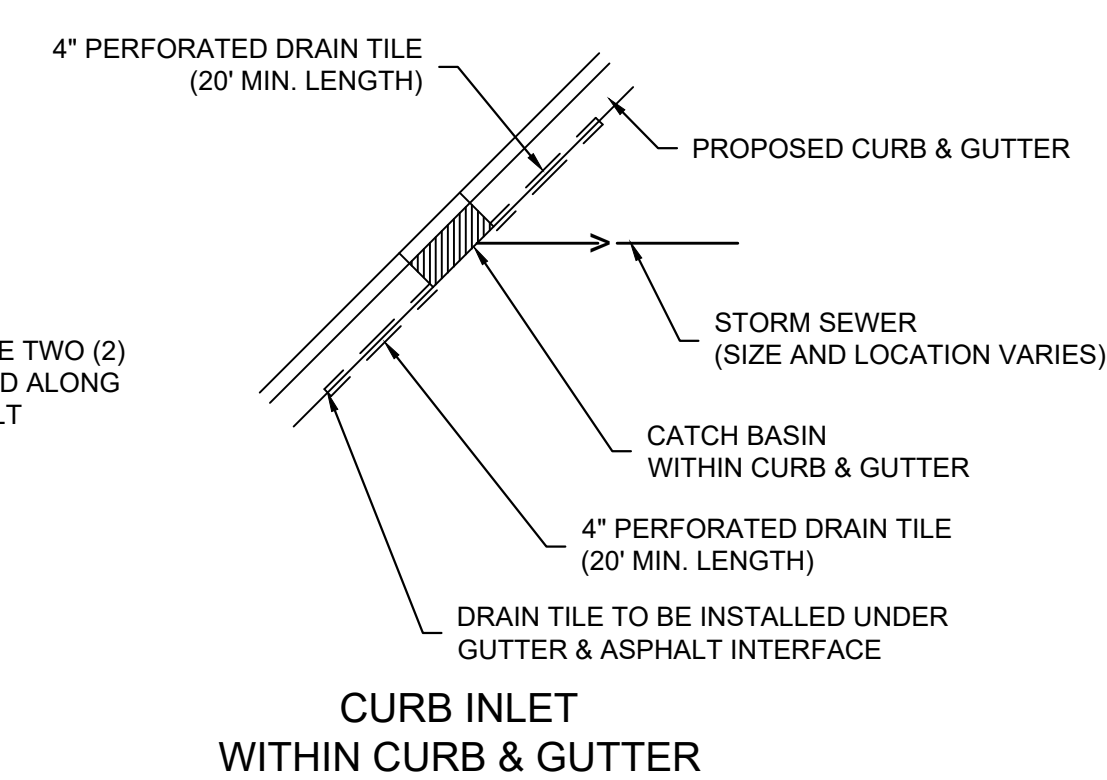
E CATCH BASIN
NOT TO SCALE



- STORM INLET NOTES:**
1. PROPOSED STORM CURB INLET SHALL BE NEENAH R-3229-A, R-3015, OR R-3228-H.
 2. PROPOSED STORM AREA INLET SHALL BE NEENAH R-2502-D, R-2501.



CATCH BASIN WITHIN PAVEMENT AREA



CURB INLET WITHIN CURB & GUTTER

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GENERAL:

- EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY, AND NO RESPONSIBILITY IS ASSUMED BY THE OWNER OR ENGINEER FOR THEIR ACCURACY OR COMPLETENESS.
- CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. CONTRACTOR SHALL HAVE SITE MARKED BY DIGGERS HOTLINE AND SHALL HAVE PRIVATE UTILITIES MARKED BY A PRIVATE UTILITY LOCATOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL VERIFY ALL ELEVATIONS, LOCATIONS, AND DEPTHS OF EXISTING UTILITIES AND SHALL CHECK AGAINST CITY RECORDS AND PROPOSED CONNECTIONS FOR CONFLICTS/DISCREPANCIES PRIOR TO INITIATING CONSTRUCTION. REPORT ANY CONFLICTS OR DISCREPANCIES TO THE ENGINEER SO REVISIONS MAY OCCUR IF NEEDED.
- LENGTHS OF ALL UTILITIES ARE TO CENTER OF STRUCTURES OR FITTINGS AND MAY VARY SLIGHTLY FROM PLANS. LENGTHS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.

SITE CLEARING:

- EXCEPT FOR STRIPPED TOPSOIL OR OTHER MATERIALS INDICATED TO REMAIN ON OWNER'S PROPERTY, CLEARED MATERIALS SHALL BECOME CONTRACTOR'S PROPERTY AND SHALL BE REMOVED FROM PROJECT SITE.
- MINIMIZE INTERFERENCE WITH ADJOINING ROADS, STREETS, WALKS, AND OTHER ADJACENT OCCUPIED OR USED FACILITIES DURING SITE-CLEARING OPERATIONS.
- SAVABLE IMPROVEMENTS: CAREFULLY REMOVE ITEMS INDICATED TO BE SALVAGED AND STORE ON OWNER'S PREMISES WHERE INDICATED.
- UTILITY LOCATOR SERVICE: NOTIFY UTILITY LOCATOR SERVICE FOR AREA WHERE PROJECT IS LOCATED BEFORE SITE CLEARING.
- DO NOT COMMENCE SITE CLEARING OPERATIONS UNTIL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ARE IN PLACE.
- PROTECT AND MAINTAIN BENCHMARKS AND SURVEY CONTROL POINTS FROM DISTURBANCE DURING CONSTRUCTION.
- LOCATE AND CLEAR FLAG LINES AND VEGETATION TO REMAIN OR TO BE RELOCATED.
- PROTECT EXISTING SITE IMPROVEMENTS TO REMAIN FROM DAMAGE DURING CONSTRUCTION. RESTORE DAMAGED IMPROVEMENTS TO THEIR ORIGINAL CONDITION, AS ACCEPTABLE TO OWNER.
- LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP OFF UTILITIES INDICATED TO BE REMOVED, ARRANGE WITH UTILITY COMPANIES TO SHUT OFF INDICATED UTILITIES.
- EXISTING UTILITIES: DO NOT INTERRUPT UTILITIES SERVING FACILITIES OCCUPIED BY OWNER OR OTHERS UNLESS PERMITTED BY THE OWNER AND THEN ONLY AFTER ARRANGING TO PROVIDE TEMPORARY UTILITY SERVICES.
- FILL DEPRESSIONS CAUSED BY CLEARING AND GRUBBING OPERATIONS WITH SATISFACTORY SOIL MATERIAL UNLESS FURTHER EXCAVATION OR EARTHWORK IS INDICATED. PLACE FILL MATERIAL IN HORIZONTAL LAYERS NOT EXCEEDING A LOOSE DEPTH OF 6 INCHES, AND COMPACT EACH LAYER TO A DENSITY EQUAL TO ADJACENT ORIGINAL GROUND.
- REMOVE SOIL AND GRASS BEFORE STRIPPING TOPSOIL.
- STRIP TOPSOIL TO WHATEVER DEPTHS ARE ENCOUNTERED IN A MANNER TO PREVENT INTERMINGLING WITH UNDERLYING SUBSOIL OR OTHER SUBSTRATE MATERIALS.
- STOCKPILE TOPSOIL MATERIALS AWAY FROM EDGE OF EXCAVATIONS WITHOUT INTERMINGLING WITH SUBSOIL. GRADE AND SHAPE STOCKPILES TO DRAIN SURFACE WATER. COVER TO PREVENT WINDBLOWN DUST.
- REMOVE EXISTING ABOVE- AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND AS NECESSARY TO FACILITATE NEW CONSTRUCTION.
- SAVOUT ALL PAVEMENTS FULL DEPTH PRIOR TO REMOVAL; SAVOUTS SHALL BE IN STRAIGHT LINES PERPENDICULAR AND/OR PARALLEL TO EXISTING PAVEMENT JOINTS AND PAVEMENT EDGES.
- REMOVE SURPLUS SOIL MATERIAL, UNSUITABLE TOPSOIL, OBSTRUCTIONS, DEMOLISHED MATERIALS, AND WASTE MATERIALS INCLUDING TRASH AND DEBRIS, AND LEGALLY DISPOSE OF THEM OFF OWNER'S PROPERTY.
- SEPARATE RECYCLABLE MATERIALS PRODUCED DURING SITE CLEARING FROM OTHER NONRECYCLABLE MATERIALS. STORE OR STOCKPILE WITHOUT INTERMINGLING WITH OTHER MATERIALS AND TRANSPORT THEM TO RECYCLING FACILITIES.

EARTH MOVING:

- ALL EARTH WORK SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER AND PROVIDED REPORTS, IN THE FIELD AND THESE SPECIFICATIONS, IN CASE OF CONFLICT BETWEEN THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER, THE RECOMMENDATIONS OF THE LOCAL MUNICIPALITY, AND THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS.
- CONTRACTOR SHALL PROVIDE MATERIAL TEST REPORTS FROM A QUALIFIED TESTING AGENCY INDICATING TEST RESULTS FOR CLASSIFICATION ACCORDING TO ASTM D2487 AND LABORATORY COMPACTION CURVES ACCORDING TO ASTM 1557 FOR EACH ON-SITE AND OFF-SITE MATERIAL, PROPOSED FOR FILL AND BACKFILL.
- CONTRACTOR SHALL PROVIDE PREEXCAVATION PHOTOS OR VIDEOS SHOWING EXISTING CONDITION OF ADJOINING STRUCTURES AND SITE IMPROVEMENTS THAT MIGHT BE MISCONSTRUED AS DAMAGE CAUSED BY EARTHWORK OPERATIONS.
- OLD BUILDING FOUNDATIONS, BUILDING REMNANTS OR UNSUITABLE BACKFILL MATERIAL SHALL BE COMPLETELY REMOVED FROM WITHIN AND A MINIMUM OF 10 FEET BEYOND THE NEW BUILDING PAD AREAS. THE RESULTING EXCAVATION SHALL BE BACKFILLED WITH COMPACTED ENGINEERED FILL.
- FOUNDATIONS, FOUNDATION WALLS OR CONCRETE FLOOR SLABS SHALL BE REMOVED TO A MINIMUM OF TWO FEET BELOW PROPOSED SUBGRADE WITHIN PROPOSED PARKING AND GREENSPACE AREAS. BASEMENT SLABS LOCATED BELOW 2 FEET FROM PLANNED SUBGRADE ELEVATION MAY BE LEFT IN PLACE BUT SHALL BE BROKEN INTO MAXIMUM 6 INCH PIECES TO FACILITATE DRAINAGE.
- SATISFACTORY SOILS FOR FILL: ASTM D 2487 SOIL CLASSIFICATION GROUPS GW, GP, GM, SW, SP, AND SM OR A COMBINATION OF THESE GROUPS; FREE OF ROCK OR GRAVEL LARGER THAN 3 INCHES IN ANY DIMENSION, DEBRIS, FROZEN MATERIALS, VEGETATION, AND OTHER DELETERIOUS MATTER OR ANY SOIL GROUP OR COMBINATION OF GROUPS APPROVED OF BY THE PROJECT GEOTECHNICAL ENGINEER.
- UNSATISFACTORY SOILS FOR FILL: SOIL CLASSIFICATION GROUPS GC, SC, CL, ML, OL, CH, OH, AND PT ACCORDING TO ASTM D 2487 OR A COMBINATION OF THESE GROUPS UNLESS DEEMED SATISFACTORY BY THE PROJECT GEOTECHNICAL ENGINEER. UNSATISFACTORY SOILS ALSO INCLUDE SOILS NOT MAINTAINED WITHIN 3 PERCENT OF OPTIMUM SOIL MOISTURE CONTENT AT THE TIME OF COMPACTION.
- AGGREGATE BASE COURSE BENEATH PAVEMENTS: SHALL BE 1-1/4" DENSE GRADED BASE COURSE CONFORMING TO SECTION 305 OF THE STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION.
- ENGINEERED FILL: NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, AND NATURAL OR CRUSHED SAND; ASTM D 2040; WITH AT LEAST 90 PERCENT PASSING A 1/2" (12.5MM) SIEVE AND NO MORE THAN 20 PERCENT PASSING A 200 SIEVE OR ANY SOIL DESIGNATED FOR ENGINEERED FILL BY THE PROJECT GEOTECHNICAL ENGINEER. ENGINEERED FILL SHALL BE FREE OF ORGANIC, FROZEN, OR OTHER DELETERIOUS MATERIAL, AND HAVE A MAXIMUM PARTICLE SIZE LESS THAN 3 INCHES. CLAY FLAKS SHALL HAVE A LIQUID LIMIT OF LESS THAN 40 AND PLASTICITY INDEX OF LESS THAN 10.
- BEDDING COURSE FOR SEWERS AND WATER SERVICE: NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, AND NATURAL OR CRUSHED SAND CONFORMING TO THE REQUIREMENTS OF SECTION 8.4.3.2 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION.
- DRAINAGE COURSE BENEATH BUILDING SLABS: NARROWLY GRADED MIXTURE OF WASHED, CRUSHED STONE, OR CRUSHED OR UNCRUSHED GRAVEL; ASTM D 448; COARSE-AGGREGATE GRADING SIZE 57; WITH 100 PERCENT PASSING A 1/2-INCH (37.5MM) SIEVE AND 0 TO 5 PERCENT PASSING A NO. 10 SIEVE.
- TRENCH BACKFILL MATERIAL SHALL BE GRANULAR BACKFILL IN ACCORDANCE WITH SECTION 8.4.3.4 OF THE STANDARD SPECIFICATIONS BENEATH AND WITHIN FIVE FEET OF PAVEMENT AREAS; COMPACTED SPOIL BACKFILL IN ACCORDANCE WITH SECTION 8.4.3.5 OF THE STANDARD SPECIFICATIONS MAY BE USED BENEATH LANDSCAPE AREAS.
- PIPE COVER MATERIAL: CONFORM TO SECTION 8.4.3.6 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION.
- PREVENT SURFACE WATER AND GROUND WATER FROM ENTERING EXCAVATIONS, FROM PONDING ON PREPARED SUBGRADES, AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA.
- SHORING, SHEETING AND BRACING: SHORE, BRACE OR SLOPE BRACKET EXCAVATION TO PROTECT WORKMEN, BANS, ADJACENT PAVING, STRUCTURES, AND UTILITIES TO MEET OHSA REQUIREMENTS. DESIGN OF TEMPORARY SUPPORT OF EXCAVATION IS THE RESPONSIBILITY OF THE CONTRACTOR.
- EXCAVATE TO SUBGRADE ELEVATIONS REGARDLESS OF THE CHARACTER OF SURFACE AND SUBSURFACE CONDITIONS ENCOUNTERED. UNCLASSIFIED EXCAVATED MATERIALS MAY INCLUDE ROCK, SOIL MATERIALS, AND OBSTRUCTIONS. NO CHANGES IN THE CONTRACT SUR OR THE CONTRACT TERMS WILL BE AUTHORIZED FOR ROCK EXCAVATION OR REMOVAL OF OBSTRUCTIONS.
- PROOF ROLL SURFACE BELOW BUILDING SLABS AND PAVEMENTS WITH FULLY LOADED TANKER AXLE DUMP TRUCK OR RUBBER Tired VEHICLE OF SIMILAR SIZE AND WEIGHT. TYPICALLY 9 TONS/AKLE, WHERE COHESIVE SOILS ARE ENCOUNTERED OR WITH A SMOOTH DRUMMED VIBRATORY ROLLER WHERE GRANULAR SOILS ARE PRESENT. DO NOT PROOF-ROLL WET OR SATURATED SUBGRADES AND PROOFROLL IN DRY WETTER. PROOF ROLL IN PRESENCE OF PROJECT GEOTECHNICAL ENGINEER OR TECHNICIAN. SOILS THAT ARE OBSERVED TO ROLL OR DEFLECT EXCESSIVELY UNDER THE MOVING LOAD SHOULD BE REPAIRED AND REPLACED WITH PROPERLY COMPACTED ENGINEERED FILL. IN PAVEMENT AREAS WHERE UNDERCUTS ARE PERFORMED, THE EDGES OF THE OVEREXCAVATIONS SHALL BE FEATHERED INTO THE SURROUNDING SUITABLE SOIL SO THAT EDGE FAILURE OF THE OVEREXCAVATION AREA DOES NOT OCCUR.
- DUE TO CLAYEY SOILS, IF UNDERCUTS OCCUR WITHIN PAVEMENT AREAS AND THEY ARE BACKFILLED WITH GRANULAR SOILS, THE BOTTOM OF THE OVEREXCAVATION SHALL BE SLOPED TO A DRAINAGE THAT IS IN KIND SLOPED TOWARD THE NEAREST STORM SEWER. MINIMUM SLOPE OF SUCH DRAINAGES SHALL BE 0.5%.
- CONVENTIONAL DISKING AND AERATION TECHNIQUES SHALL BE USED TO DRY SOILS BEFORE PROOF ROLLING. ALLOW FOR PROPER DRYING TIME IN PROJECT SCHEDULE.
- ENGINEERED FILL SHALL BE PLACED IN MAXIMUM LIFTS OF EIGHT INCHES OR LOOSE MATERIAL AND COMPACTED WITHIN 3% OF OPTIMUM SOIL MOISTURE CONTENT VALUE AND A MINIMUM OF 90% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST ASTM D1557. EACH LIFT OF COMPACTED ENGINEERED FILL SHALL BE OBSERVED AND TESTED BY A QUALIFIED GEOTECHNICAL ENGINEER OR TECHNICIAN.
- EXISTING OLD FILL MATERIAL SHALL BE REMOVED BELOW FOOTINGS OR FOUNDATION SUPPORTING FILL. ENGINEERED FILL BELOW FOOTINGS SHOULD HAVE IN-PLACE DENSITY OF 90% OF THE MAXIMUM DRY DENSITY AND A MOISTURE CONTENT WITHIN 3% OF OPTIMUM AS DETERMINED BY ASTM D1557. ENGINEERED FILL BELOW FOOTINGS SHALL BE EVALUATED BY IN-FIELD DENSITY TESTS DURING CONSTRUCTION.
- WHERE UNSUITABLE BEARING SOILS ARE ENCOUNTERED IN A FOOTING EXCAVATION, THE EXCAVATION SHALL BE DEEPENED TO COMPENSATE BEARING SOIL AND THE FOOTING LOWERED OR AN OVEREXCAVATION AND BACKFILL PROCEDURE PERFORMED. OVEREXCAVATION AND BACKFILL TREATMENT REQUIRES WIDENING THE DEEPENED EXCAVATION IN ALL DIRECTIONS AT LEAST 6 INCHES BEYOND THE EDGE OF THE FOOTING FOR EACH 12 INCHES OF OVEREXCAVATION SHALL BE BACKFILLED UP TO FOOTING BASE ELEVATION IN MAXIMUM 6 INCH LOOSE LIFTS WITH SUITABLE GRANULAR FILL MATERIAL AND COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AND A MOISTURE CONTENT WITHIN 3% OF OPTIMUM AS DETERMINED BY ASTM D1557. SOILS AT FOUNDATION BEARING ELEVATION IN THE FOOTING EXCAVATIONS SHALL BE OBSERVED AND TESTED BY A QUALIFIED GEOTECHNICAL ENGINEER OR TECHNICIAN.
- A MINIMUM OF FOUR INCHES OF DRAINAGE COURSE MAT SHALL BE PLACED BELOW BUILDING FLOOR SLABS. DRAINAGE COURSE MAT SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION WITH RESPECT TO THE MODIFIED PROCTOR (ASTM D1557).
- UTILITY TRENCHES FOR SEWER AND WATER SHALL CONFORM TO CLASS B COMPACTED TRENCH SECTION IN ACCORDANCE WITH FILE NO. 4 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION.
- BACKFILL UTILITY TRENCHES IN 4 TO 10 INCH LOOSE LIFTS COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557. BACKFILL SHALL BE MOISTURE CONDITIONED TO BE WITH 3% OF OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D1557.
- UTILITY BEDDING PLACEMENT: CONFORM TO SECTION 3.2.6 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, LATEST EDITION. BEDDING MATERIAL SHALL BE COMPACTED TO A MINIMUM OF 90% COMPACTION WITH RESPECT TO THE MODIFIED PROCTOR (ASTM D1557).
- COMPACTION TESTING OF UTILITY TRENCHES SHALL BE PERFORMED FOR EVERY 200 CUBIC YARDS OF BACKFILL PLACED OR EACH LIFT WITHIN 200 LINEAR FEET OF TRENCH, WHICHEVER IS LESS.
- AGGREGATE BASE COURSE BENEATH PAVEMENTS SHALL BE PLACED AND COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN 3% OF OPTIMUM AS DETERMINED BY ASTM D1557. AGGREGATE BASE SHALL BE OBSERVED AND TESTED BY A QUALIFIED GEOTECHNICAL ENGINEER OR TECHNICIAN.
- GRADING GENERAL: UNIFORMLY GRADE AREAS TO A SMOOTH SURFACE. FREE OF IRREGULAR SURFACE CHANGES. COMPLY WITH COMPACTION REQUIREMENTS AND GRADE TO CROSS SECTIONS, LINES, AND ELEVATIONS INDICATED. SLOPE GRADERS TO DIRECT WATER AWAY FROM BUILDINGS AND TO PREVENT PONDING.
- TESTING AGENCY: CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT GEOTECHNICAL ENGINEERING TESTING AGENCY TO PERFORM FIELD QUALITY CONTROL TESTING.
- FOOTING SUBGRADE TESTING: EACH ISOLATED FOOTING SHALL INCLUDE AT LEAST ONE TEST PROBE. TEST PROBES SHALL BE PERFORMED EVERY 200 LINEAR FEET IN CONTINUOUS FOOTINGS.
- BUILDING SLAB AREA TESTING: AT SUBGRADE AND AT EACH COMPACTED LIFT AND BACKFILL LAYER, AT LEAST 1 TEST PER LIFT FOR EVERY 2500 SQ. FT. OR LESS OF BUILDING SLAB, BUT IN NO CASE FEWER THAN 3 TESTS.
- PAVEMENT AREA TESTING: AT SUBGRADE AND AT EACH COMPACTED FILL AND BACKFILL LAYER, AT LEAST ONE TEST FOR EVERY LIFT FOR EVERY 2,500 SQUARE FEET OF PAVEMENT AREA, BUT IN NO CASES FEWER THAN 3 TESTS.
- UTILITY TRENCH BACKFILL TESTING: ONE TEST FOR EACH 200 CUBIC YARDS OF FILL BACKFILL PLACED OR ONE TEST PER 200 LINEAR FEET OF TRENCH FOR EACH LIFT, WHICHEVER IS LESS.
- FOUNDATION WALL BACKFILL: AT EACH COMPACTED BACKFILL LAYER AT LEAST 1 TEST PER LIFT FOR EACH 500 FEET OR LESS OF WALL LENGTH, BUT NO FEWER THAN 2 TESTS.
- WHEN TESTING AGENCY REPORTS THAT SUBGRADES, FILLS, OR BACKFILLS HAVE NOT ACHIEVED DENSITY OR COMPACTION SPECIFIED, SCARIFY AND MOISTEN OR AERATE, OR REMOVE AND REPLACE SOIL TO DEPTH REQUIRED, RECOMPACT AND RETEST UNTIL SPECIFIED COMPACTION IS OBTAINED.
- DISPOSAL: REMOVE SURPLUS SOIL AND WASTE MATERIAL, INCLUDING UNSATISFACTORY SOIL, TRASH, AND DEBRIS, AND LEGALLY DISPOSE OF IT OFF OWNER'S PROPERTY.

CONCRETE PAVING:

- THE COMPOSITION, PLACING AND CONSTRUCTION OF CONCRETE PAVEMENTS SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF SECTIONS 415.416, 501.601, 601, AND 602 OF THE STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION (WISDOT STANDARD SPECIFICATIONS) AND LOCAL MUNICIPAL REGULATIONS AND SPECIFICATIONS.
- CONTRACTOR SHALL PROVIDE PRODUCT DATA FOR EACH TYPE OF PRODUCT INDICATED - INCLUDE TECHNICAL DATA AND TESTED PHYSICAL AND PERFORMANCE PROPERTIES, JOB-MIX DESIGNS, CERTIFICATION THAT MIX MEETS OR EXCEEDS WISDOT STANDARD SPECIFICATIONS, AND MATERIAL CERTIFICATES CERTIFYING COMPLIANCE WITH WISDOT STANDARD SPECIFICATIONS.
- MANUFACTURER QUALIFICATIONS: MANUFACTURER OF READY-MIXED CONCRETE PRODUCTS WHO COMPLIES WITH ASTM C 940-94M REQUIREMENTS FOR PRODUCTION FACILITIES AND EQUIPMENT AND APPROVED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.
- CONCRETE GRADE: GRADE A OR GRADE A-2 CONFORMING TO SECTION 501.3.1.3 OF THE WISDOT STANDARD SPECIFICATIONS.
- AGGREGATES: CONFORM TO SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS. PROVIDE AGGREGATES FROM A SINGLE SOURCE.
- WATER: ASTM C 84/C 84M AND SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS.
- AIR-ENTRAINING ADMIXTURE: ASTM C 260 AND SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS.
- CHEMICAL ADMIXTURES: PER SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS.
- CURING MATERIALS IN ACCORDANCE WITH SECTION 415.3.12 OF THE WISDOT STANDARD SPECIFICATIONS.
- EXPANSION JOINT MATERIAL: CONFORM TO SECTION 415.2.2 OF THE WISDOT STANDARD SPECIFICATIONS.
- MEASURE, BATCH, AND MIX CONCRETE MATERIALS AND CONCRETE IN ACCORDANCE WITH SECTION 501 OF THE WISDOT STANDARD SPECIFICATIONS.
- GENERAL EXECUTION: CONFORM TO SECTION 415 OF THE WISDOT STANDARD SPECIFICATIONS.
- PROOFROLL SUBGRADE AND AGGREGATE BASE AS OUTLINED IN EARTH MOVING SPECIFICATION PRIOR TO PLACEMENT OF PAVEMENTS.
- SET, BRACE, AND SECURE EDGE FORMS, BULKHEADS, AND INTERMEDIATE SCREED GUIDES FOR PAVEMENT TO REQUIRED LINES, GRADES, AND ELEVATIONS. INSTALL FORMS TO ALLOW CONTINUOUS PROGRESS OF WORK AND SO FORMS CAN REMAIN IN PLACE AT LEAST 24 HOURS AFTER CONCRETE PLACEMENT.
- CLEAN FORMS AFTER EACH USE AND COAT WITH FORM-RELEASE AGENT TO ENSURE SEPARATION FROM CONCRETE WITHOUT DAMAGE.
- JOINTS GENERAL: FORM CONSTRUCTION, ISOLATION, AND CONTRACTION JOINTS AND TOOL EDGINGS TRUE TO LINE WITH FACES PERPENDICULAR TO SURFACE PLANE OF CONCRETE. CONSTRUCT TRANSVERSE JOINTS AT RIGHT ANGLES TO CENTERLINE, UNLESS OTHERWISE INDICATED. CONFORM TO SECTION 415 OF THE WISDOT STANDARD SPECIFICATIONS.
- CONSTRUCTION JOINTS: SET CONSTRUCTION JOINTS AT SIDE AND END TERMINATIONS OF PAVEMENT AND AT LOCATIONS WHERE PAVEMENT OPERATIONS ARE STOPPED FOR MORE THAN ONE-HALF HOUR UNLESS PAVEMENT TERMINATES AT ISOLATION JOINTS.
- ISOLATION JOINTS: FORM ISOLATION JOINTS OF PREFORMED JOINT-FILLER STRIPS ABUTTING CONCRETE CURBS, CATCH BASINS, MANHOLES, INLETS, STRUCTURES, WALKS, OTHER FIXED OBJECTS, AND WHERE INDICATED.
- CONTRACTION JOINTS: FORM WEAKENED-PLANE CONTRACTION JOINTS. SECTIONING CONCRETE INTO AREAS AS INDICATED. CONSTRUCT CONTRACTION JOINTS FOR A DEPTH EQUAL TO AT LEAST ONE-FOURTH OF THE CONCRETE THICKNESS TO MATCH JOINTING OF EXISTING ADJACENT CONCRETE PAVEMENT.
- EDGING: TOOL EDGES OF PAVEMENT, CURBS, AND JOINTS IN CONCRETE AFTER INITIAL FLOATING WITH AN EDGING TOOL TO A 1/4-INCH RADIUS. REPEAT TOOLING OF EDGES AFTER APPLYING SURFACE FINISHES. ELIMINATE TOOL MARKS ON CONCRETE SURFACES.
- CURBING: COMPLY WITH SECTION 601 OF THE WISDOT STANDARD SPECIFICATIONS.
- SIDEWALKS: COMPLY WITH SECTION 602 OF THE WISDOT STANDARD SPECIFICATIONS.
- MOISTEN CURBING TO PROVIDE A UNIFORM DAMPENED CONDITION AT TIME CONCRETE IS PLACED.
- FINISH SUBGRADE IN ACCORDANCE WITH SECTION 601.3.3 OF THE WISDOT STANDARD SPECIFICATIONS.
- FINISH SIDEWALK AND PATIO IN ACCORDANCE WITH SECTION 602.3.2.3 OF THE WISDOT STANDARD SPECIFICATIONS (LIGHT BROOM FINISH).
- FINISH CONCRETE VEHICULAR PAVEMENTS AND PADS IN ACCORDANCE WITH SECTION 415.3.8 OF THE WISDOT STANDARD SPECIFICATIONS (ARTIFICIAL TURF DRAG FINISH).
- PROTECT AND CURE SIDEWALK IN ACCORDANCE WITH SECTION 602.3.2.6 OF THE WISDOT STANDARD SPECIFICATIONS.
- PROTECT AND CURE CURBING IN ACCORDANCE WITH SECTION 601.3.7 OF THE WISDOT STANDARD SPECIFICATIONS.
- PROTECT AND CURE VEHICULAR CONCRETE PAVING IN ACCORDANCE WITH SECTION 415.3.12 OF THE WISDOT STANDARD SPECIFICATIONS.
- REMOVE AND REPLACE CONCRETE PAVEMENT THAT IS BROKEN, DAMAGED, OR DEFECTIVE OR THAT DOES NOT COMPLY WITH REQUIREMENTS IN THIS SECTION.
- PROTECT CONCRETE FROM DAMAGE. EXCLUDE TRAFFIC FROM PAVEMENT FOR AT LEAST 7 DAYS AFTER PLACEMENT.
- MAINTAIN CONCRETE PAVEMENT FREE OF STAINS, DISCOLORATION, DIRT, AND OTHER FOREIGN MATERIAL. SWEEP CONCRETE PAVEMENT NOT MORE THAN TWO DAYS BEFORE DATE SCHEDULED FOR SUBSTANTIAL COMPLETION OPERATIONS.

ASPHALTIC PAVING:

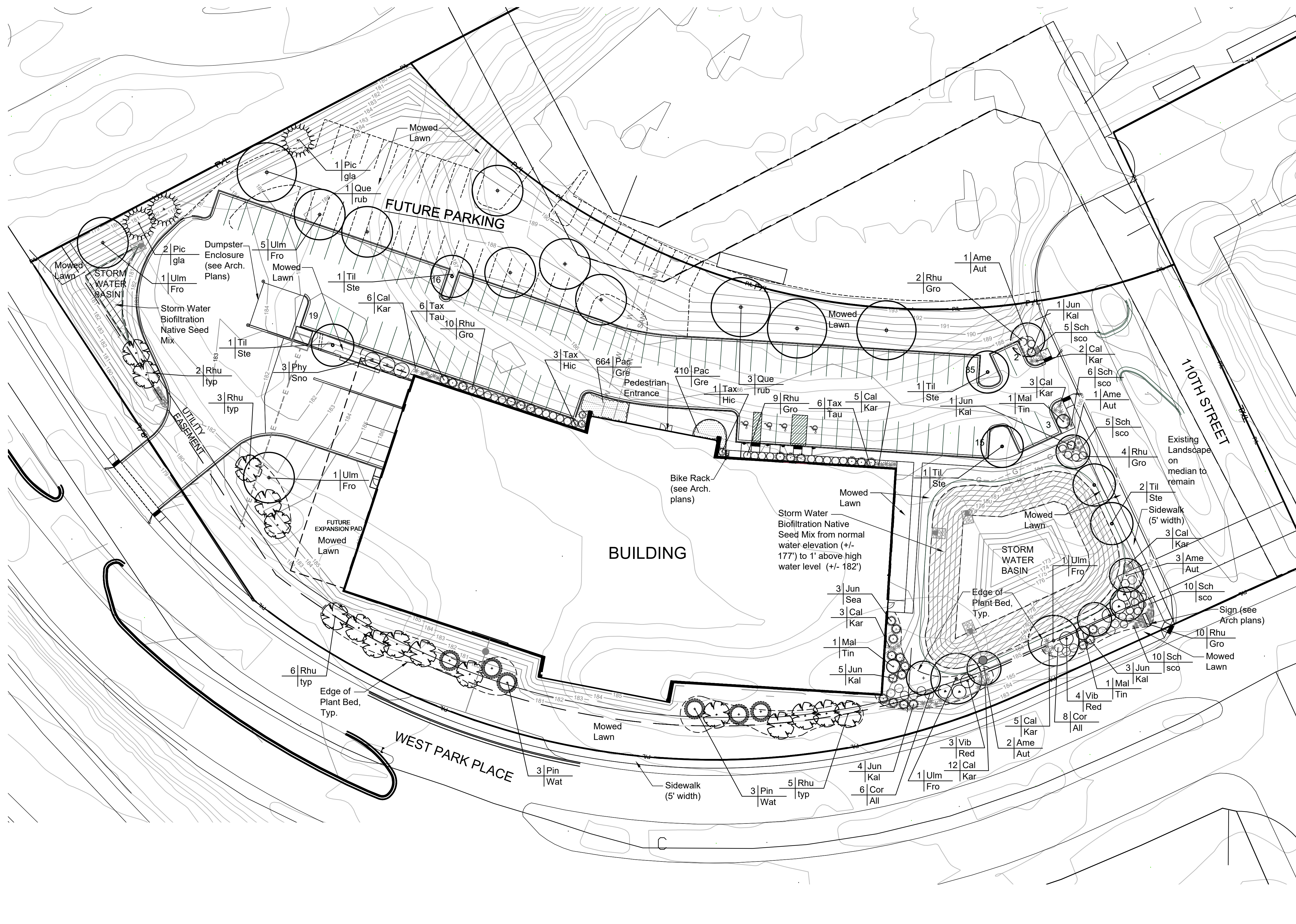
- THE COMPOSITION, PLACING AND CONSTRUCTION OF ASPHALTIC PAVEMENTS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS 450, 455, 460, 465, AND 475 OF THE STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION (WISDOT STANDARD SPECIFICATIONS).
- CONTRACTOR SHALL PROVIDE PRODUCT DATA FOR EACH TYPE OF PRODUCT INDICATED - INCLUDE TECHNICAL DATA AND TESTED PHYSICAL AND PERFORMANCE PROPERTIES, JOB-MIX DESIGNS, CERTIFICATION THAT MIX MEETS OR EXCEEDS WISDOT STANDARD SPECIFICATIONS, AND MATERIAL CERTIFICATES CERTIFYING COMPLIANCE WITH WISDOT STANDARD SPECIFICATIONS.
- MANUFACTURER QUALIFICATIONS: MANUFACTURER SHALL BE REGISTERED WITH AND APPROVED BY THE DOT OF THE STATE IN WHICH PROJECT IS LOCATED.
- ENVIRONMENTAL LIMITATIONS: DO NOT APPLY ASPHALT MATERIALS IF BASE COURSE IS WET OR EXCESSIVELY DAMP OR IF THE FOLLOWING CONDITIONS ARE NOT MET: APPLY TACK COAT WHEN AMBIENT TEMPERATURE IS ABOVE 50 DEGREES FAHRENHEIT AND WHEN TEMPERATURE HAS NOT BEEN BELOW 35 DEGREES FAHRENHEIT FOR 12 HOURS IMMEDIATELY PRIOR TO APPLICATION; PLACE ASPHALTIC CONCRETE SURFACE COURSE MAY BE PLACED WHEN AIR TEMPERATURE IS ABOVE 50 DEGREES FAHRENHEIT AND RISINS: PROCEED WITH PAVEMENT MARKINGS ONLY ON CLEAN, DRY SURFACES; DO NOT APPLY BELOW THE MINIMUM PAVEMENT TEMPERATURE AS RECOMMENDED BY THE MANUFACTURER.
- AGGREGATES SHALL BE IN ACCORDANCE WITH SECTION 460.2.2 OF THE WISDOT STANDARD SPECIFICATIONS.
- ASPHALT MATERIALS SHALL BE IN ACCORDANCE WITH CHAPTER 455 OF THE WISDOT STANDARD SPECIFICATIONS.
- PAVEMENT MARKING PAINT: PROVIDE PAINT FROM THE WISCONSIN DEPARTMENT OF TRANSPORTATIONS APPROVED PRODUCTS LIST. COLOR SHALL BE WHITE UNLESS INDICATED OTHERWISE ON PLANS.
- HOT-MIX ASPHALT: ASPHALTIC BINDER COURSE AND SURFACE COURSE SHALL BE MIXTURE E-1 FOR REGULAR DUTY PAVEMENT AND E-1 FOR HEAVY DUTY PAVEMENT COMPLYING WITH THE WISDOT STANDARD SPECIFICATIONS.
- AGGREGATE BASE COURSE BENEATH PAVEMENTS: SHALL BE 1-1/4" DENSE GRADED BASE COURSE CONFORMING TO SECTION 305 OF THE WISDOT STANDARD SPECIFICATIONS.
- PAVEMENT PLACEMENT GENERAL: ASPHALT CONCRETE PAVING EQUIPMENT, WEATHER LIMITATIONS, JOB-MIX FORMULA, MIXING, CONSTRUCTION METHODS, COMPACTION, FINISHING, TOLERANCE AND PROTECTION SHALL CONFORM TO THE REQUIREMENTS OF THE APPROPRIATE SECTION OF THE WISDOT STANDARD SPECIFICATIONS.
- PREPARE AND PROOFROLL SUBGRADES AND AGGREGATE BASE COURSE AS OUTLINED IN EARTH MOVING SPECIFICATIONS PRIOR TO PLACEMENT OF ASPHALT PAVEMENTS.
- SWEEP LOOSE GRANULAR PARTICLES FROM SURFACE OF AGGREGATE BASE COURSE PRIOR TO PAVEMENT PLACEMENT. DO NOT DISCLOSE OR DISTURB AGGREGATE EMBEDDED IN COMPACTED SURFACE OF BASE COURSE.
- SPREAD AND FINISH ASPHALTIC MIXTURE IN ACCORDANCE WITH SECTION 460.3.2.5 OF THE WISDOT STANDARD SPECIFICATIONS. PAVEMENT THICKNESSES SHALL BE AS INDICATED ON THE PLANS.
- PROPERLY CORRECT SURFACE IRREGULARITIES IN PAVING COURSE BEHIND PAVES. USE SUITABLE HAND TOOLS TO REMOVE EXCESS MATERIAL, FORMING HIGH SPOTS. FILL DEPRESSIONS WITH HOT-MIX ASPHALT TO PREVENT SEGREGATION OF MIX. USE SUITABLE HAND TOOLS TO SMOOTH SURFACE.
- COMPACT ASPHALTIC PAVEMENT IN ACCORDANCE WITH SECTION 450.3.2.6 OF THE WISDOT STANDARD SPECIFICATIONS.
- PROTECTION: AFTER FINAL ROLLING, DO NOT PERMIT VEHICULAR TRAFFIC ON PAVEMENT UNTIL IT HAS COOLED AND HARDENED. ERECT BARRICADES TO PROTECT PAVING FROM TRAFFIC UNTIL MIXTURE HAS COOLED ENOUGH NOT TO BECOME MARKED.
- THICKNESS TOLERANCE: COMPACT EACH COURSE TO PRODUCE THE THICKNESS INDICATED WITHIN PLUS/MINUS 1/4 INCH FOR BINDER COURSE AND PLUS 1/4 INCH FOR SURFACE COURSE. NO MINUS.
- SURFACE SMOOTHNESS TOLERANCE: COMPACT EACH COURSE TO PRODUCE A SURFACE SMOOTHNESS WITHIN THE FOLLOWING TOLERANCES AS DETERMINED BY USING A 10-FOOT STRAIGHTEDGE APPLIED TRANSVERSELY OR LONGITUDINALLY TO PAVED AREAS: BINDER COURSE: 1/4 INCH; SURFACE COURSE: 1/8 INCH. REMOVE AND REPLACE ALL HUMPS OR DEPRESSIONS EXCEEDING THE SPECIFIED TOLERANCE.
- DO NOT APPLY PAVEMENT-MARKING PAINT UNTIL LAYOUT, COLORS, AND PLACEMENT HAVE BEEN VERIFIED WITH ENGINEER.
- APPLY MARKINGS TO A DRY SURFACE FREE FROM FROST, REMOVE DUST, DIRT, OIL, GREASE, GRAVEL, DEBRIS OR OTHER MATERIAL THAT MAY PREVENT BONDING TO THE PAVEMENT.
- APPLY PAINT AS THE MANUFACTURER SPECIFIES WITH MECHANICAL EQUIPMENT TO PRODUCE PAVEMENT MARKINGS, OF DIMENSIONS INDICATED, WITH UNIFORM, STRAIGHT EDGES. APPLY AT MANUFACTURERS RECOMMENDED RATES AT A MINIMUM RATE OF 17.5 GALLONS/MILE FOR A CONTINUOUS 4 LINE.
- TESTING AGENCY: CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY TO PERFORM FIELD TESTS AND INSPECTIONS AND TO PREPARE TEST REPORTS.

SEGMENTAL RETAINING WALL:

- WORK SHALL CONSIST OF FURNISHING DETAILED DESIGN, MATERIALS, LABOR, EQUIPMENT AND SUPERVISION TO INSTALL A SEGMENTAL RETAINING WALL SYSTEM IN ACCORDANCE WITH PLANS AND SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMANCE WITH THE LINES, GRADES, DESIGN AND DIMENSIONS SHOWN ON PLANS.
- MANUFACTURER QUALIFICATIONS: CONTRACTOR SHALL SUBMIT MANUFACTURER'S BEST QUALITY PRODUCTS TO THE PROJECT GEOTECHNICAL ENGINEER FOR REVIEW AND APPROVAL. THE REINFORCEMENT MEET THE REQUIREMENTS OF SECTION 2 OF THIS SPECIFICATION.
- DESIGN SUBMITTAL: THE CONTRACTOR SHALL SUBMIT TWO SETS OF DETAILED DESIGN CALCULATIONS AND FINAL RETAINING WALL PLANS FOR APPROVAL AT LEAST TWO WEEKS PRIOR TO THE BEGINNING OF WALL CONSTRUCTION. ALL CALCULATIONS AND DRAWINGS SHALL BE PREPARED AND SEALED BY A PROFESSIONAL CIVIL ENGINEER (P.E.) - (WALL DESIGN ENGINEER) EXPERIENCED IN SRW DESIGN AND LICENSED IN THE STATE WHERE THE WALL IS TO BE BUILT.
- SEGMENTAL RETAINING WALL (SRW) UNITS SHALL BE MACHINE FORMED, PORTLAND CEMENT CONCRETE BLOCKS SPECIFICALLY DESIGNED FOR RETAINING WALL APPLICATIONS. SRW UNITS SHALL BE VERSA-LOK STANDARD RETAINING WALL UNITS, KEYSTONE RETAINING WALL UNITS, ROCKWOOD RETAINING WALL UNITS OR APPROVED EQUAL.
- COLOR AND STYLE OF SRW UNITS SHALL BE AS SELECTED BY ARCHITECT AND OWNER FROM MANUFACTURER'S FULL RANGE.
- SRW UNITS SHALL BE CAPABLE OF BEING ERICED WITH THE HORIZONTAL GAP BETWEEN ADJACENT UNITS NOT EXCEEDING 1/8 INCH.
- SRW UNITS SHALL BE SOUND AND FREE OF CRACKS OR OTHER DEFECTS THAT WOULD INTERFERE WITH THE PROPER PLACING OF THE UNIT OR SIGNIFICANTLY IMPAIR THE STRENGTH OR PERMANENCE OF THE STRUCTURE. ANY CRACKS OR CHIPS OBSERVED DURING CONSTRUCTION SHALL FALL WITHIN THE GUIDELINES OUTLINED IN ASTM C 1372.
- CONCRETE SRW UNITS SHALL CONFORM TO THE REQUIREMENTS OF ASTM 1372 AND HAVE A MINIMUM NET AVERAGE 28 DAYS COMPRESSIVE STRENGTH OF 3000 PSI. COMPRESSIVE STRENGTH TEST RESULTS SHALL BE SUBMITTED TO THE PROJECT GEOTECHNICAL ENGINEER AND APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER.
- SRW UNITS MOLDED DIMENSIONS SHALL NOT DIFFER MORE THAN ± 1/8 INCH FROM THAT SPECIFIED, AS MEASURED IN ACCORDANCE WITH ASTM C 140. THIS TOLERANCE DOES NOT APPLY TO ARCHITECTURAL SURFACES, SUCH AS SPILT FACES.
- SRW UNITS SHALL BE INTERLOCKED WITH CONNECTION PINS. THE PINS SHALL CONSIST OF GLASS-REINFORCED NYLON MADE FOR THE EXPRESSED USE WITH THE SRW UNITS SUPPLIED.
- GEOTECHNICAL REINFORCING MATERIALS SHALL BE SPECIFICALLY MANUFACTURED FOR SOIL REINFORCEMENT APPLICATIONS. THE TYPE, STRENGTH AND PLACEMENT OF THE GEOSYNTHETIC REINFORCEMENT SHALL BE DETERMINED BY PROCEDURES OUTLINED IN THIS SPECIFICATION AND THE NCM DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS (3RD EDITION 2009) AND MATERIALS SHALL BE SPECIFIED BY WALL DESIGN ENGINEER IN THEIR FINAL WALL PLANS AND SPECIFICATIONS. THE MANUFACTURERS/SUPPLIERS OF THE GEOSYNTHETIC REINFORCEMENT SHALL HAVE DEMONSTRATED CONSTRUCTION OF SIMILAR SIZE AND TYPES OF SEGMENTAL RETAINING WALLS ON PREVIOUS PROJECTS.
- THE TYPE, STRENGTH AND PLACEMENT OF THE REINFORCING GEOSYNTHETIC SHALL BE AS DETERMINED BY THE WALL DESIGN ENGINEER, AS SHOWN ON THE FINAL, P.E.-STAMPED RETAINING WALL PLANS.
- MATERIAL FOR LEVELING PAD SHALL CONSIST OF COMPACTED SAND, GRAVEL, OR COMBINATION THEREOF (USCS SOIL TYPES GP, GW, SP, SW) AND SHALL BE A MINIMUM OF 6 INCHES IN DEPTH. LEAN CONCRETE WITH A STRENGTH OF 3000 PSI AND 3 INCHES THICK MAXIMUM MAY ALSO BE USED AS A LEVELING PAD MATERIAL. THE LEVELING PAD SHOULD EXTEND LATERALLY AT LEAST A DISTANCE OF 6 INCHES FROM THE TOE AND HEEL OF THE LOWERMOST SRW UNIT.
- DRAINAGE AGGREGATE SHALL BE ANGULAR, CLEAN STONE OR GRANULAR FILL MEETING THE FOLLOWING GRADATION AS DETERMINED IN ACCORDANCE WITH ASTM D422:

SIEVE SIZE	PERCENT PASSING
1" INCH	100
3/4 INCH	75-100
NO. 4	0-60
NO. 40	0-5
NO. 200	0-5
- THE DRAINAGE COLLECTION PIPE SHALL BE A PERFORATED OR SLOTTED PIPE, OR CORRUGATED HDPE PIPE. THE DRAINAGE PIPE MAY BE WRAPPED WITH A GEOTEXTILE TO FUNCTION AS A FILTER.
- DRAINAGE PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM F 405 OR F 788.
- THE REINFORCED SOIL MATERIAL SHALL BE FREE OF DEBRIS, UNLESS OTHERWISE NOTED ON THE FINAL, P.E.-SEALED, RETAINING WALL PLANS PREPARED BY THE WALL DESIGN ENGINEER. THE REINFORCED MATERIAL SHALL CONSIST OF THE INORGANIC USCS SOIL TYPES GP, GW, SP, SW, MEETING THE FOLLOWING GRADATION, AS DETERMINED IN ACCORDANCE WITH ASTM D422:

SIEVE SIZE	PERCENT PASSING
1" INCH	100
NO. 4	20-100
NO. 40	0-60
NO. 200	0-35
- THE MAXIMUM PARTICLE SIZE OF POORLY-GRADED GRAVELS (GP) (NO FINES) SHOULD NOT EXCEED 3/4 INCH UNLESS EXPRESSLY APPROVED BY THE WALL DESIGN ENGINEER AND THE LONG-TERM DESIGN STRENGTH (LTD)S OF THE GEOSYNTHETIC IS REDUCED TO ACCOUNT FOR ADDITIONAL INSTALLATION DAMAGE FROM PARTICLES LARGER THAN THIS MAXIMUM.
- THE PLASTICITY OF THE FINE FRACTION SHALL BE LESS THAN 20.
- THE PH OF THE BACKFILL MATERIAL SHALL BE BETWEEN 3 AND 9 WHEN TESTED IN ACCORDANCE WITH ASTM G 51.
- DRAINAGE GEOTEXTILE TYPE: THE STRUCTURE OF THE GEOSYNTHETIC SPECIFICALLY MANUFACTURED FOR USE AS A PREMIABLE SOIL FILTER THAT RETAINS SOIL WHILE STILL ALLOWING WATER TO PASS THROUGH THE LIFE OF THE STRUCTURE. THE TYPE AND PLACEMENT OF THE GEOTEXTILE FILTER MATERIAL SHALL BE AS REQUIRED BY THE WALL DESIGN ENGINEER IN THEIR FINAL WALL PLANS AND SPECIFICATIONS.
- THE DESIGN ANALYSIS FOR THE FINAL, P.E.-STAMPED RETAINING WALL PLANS PREPARED BY THE WALL DESIGN ENGINEER SHALL CONSIDER THE EXTERNAL STABILITY AGAINST SLIDING AND OVERTURNING, INTERNAL STABILITY AND GLOBAL STABILITY OF THE REINFORCED SOIL MASS, AND SHALL BE IN ACCORDANCE WITH ACCEPTABLE ENGINEERING PRACTICE AND THESE SPECIFICATIONS. THE INTERNAL AND EXTERNAL STABILITY ANALYSIS SHALL BE PERFORMED IN ACCORDANCE WITH THE 'NCMA DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS, 3RD EDITION' USING THE RECOMMENDED MINIMUM FACTORS OF SAFETY IN THIS MANUAL.
- EXTERNAL STABILITY ANALYSIS FOR BEARING CAPACITY, GLOBAL STABILITY, AND TOTAL AND DIFFERENTIAL SETTLEMENT SHALL BE THE RESPONSIBILITY OF THE OWNER AND THE OWNER'S GEOTECHNICAL ENGINEER. THE GEOTECHNICAL ENGINEER SHALL PERFORM BEARING CAPACITY, SETTLEMENT ESTIMATES, AND GLOBAL STABILITY ANALYSIS BASED ON THE FINAL WALL DESIGN PROVIDED BY THE WALL DESIGN ENGINEER AND COORDINATE ANY REQUIRED CHANGES WITH THE WALL DESIGN ENGINEER.
- THE GEOSYNTHETIC PLACEMENT IN THE WALL DESIGN SHALL HAVE 100% CONTINUOUS COVERAGE PARALLEL TO THE WALL FACE, GAPPING BETWEEN HORIZONTALLY ADJACENT LAYERS OF GEOSYNTHETIC (PARTIAL COVERAGE) WILL NOT BE ALLOWED.
- CONTRACTOR'S FIELD CONSTRUCTION SUPERVISOR SHALL HAVE DEMONSTRATED EXPERIENCE AND BE QUALIFIED TO DIRECT ALL WORK AT THE SITE.
- CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES SHOWN ON THE PROJECT GRADING PLANS. CONTRACTOR SHALL TAKE PRECAUTIONS TO MINIMIZE OVER-EXCAVATION. OVER-EXCAVATION SHALL BE FILLED WITH COMPACTED INFILL MATERIAL, OR AS DIRECTED BY THE WALL DESIGN ENGINEER, AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL VERIFY LOCATION OF EXISTING STRUCTURES AND UTILITIES PRIOR TO EXCAVATION. CONTRACTOR SHALL ENSURE ALL SURROUNDING STRUCTURES ARE PROTECTED FROM THE EFFECTS OF WALL EXCAVATION. EXCAVATION SUPPORT, IF REQUIRED, IS THE RESPONSIBILITY OF THE CONTRACTOR.
- FOLLOWING THE EXCAVATION, THE FOUNDATION SOIL SHALL BE EXAMINED BY THE OWNER'S ENGINEER TO ASSURE ADEQUATE FOUNDATION SOIL STRENGTH MEETS OR EXCEEDS THE ASSUMED DESIGN BEARING STRENGTH. SOILS NOT MEETING THE REQUIRED STRENGTH SHALL BE REMOVED AND REPLACED WITH INFILL SOILS, AS DIRECTED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER.
- FOUNDATION SOIL SHALL BE PROOF-ROLLED AND COMPACTED TO 95% STANDARD PROCTOR DENSITY AND INSPECTED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF LEVELING PAD MATERIALS.
- LEVELING PAD SHALL BE PLACED AS SHOWN ON THE FINAL, P.E.-SEALED RETAINING WALL PLANS WITH A MINIMUM THICKNESS OF 6 INCHES. THE LEVELING PAD SHOULD EXTEND LATERALLY AT LEAST A DISTANCE OF 6 INCHES FROM THE TOE AND HEEL OF THE LOWERMOST SRW UNIT.
- GRANULAR LEVELING PAD MATERIAL SHALL BE COMPACTED TO PROVIDE A FIRM, LEVEL BEARING SURFACE ON WHICH TO PLACE THE FIRST COURSE OF UNITS. WELL-GRADED SAND CAN BE USED TO SMOOTH THE TOP 1/4 INCH TO 1/2 INCH OF THE LEVELING PAD. COMPACTION WILL BE WITH MECHANICAL PLATE COMPACTORS TO ACHIEVE 95% OF MAXIMUM STANDARD PROCTOR DENSITY (ASTM D 698).
- ALL SRW UNITS SHALL BE INSTALLED AT THE PROPER ELEVATION AND ORIENTATION AS SHOWN ON THE FINAL, P.E.-SEALED WALL PLANS AND DETAILS OR AS DIRECTED BY THE WALL DESIGN ENGINEER. THE SRW UNITS SHALL BE INSTALLED IN GENERAL ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE SPECIFICATIONS AND DRAWINGS SHALL GOVERN IN ANY CONFLICT BETWEEN THE TWO REQUIREMENTS.
- FIRST COURSE OF SRW UNITS SHALL BE PLACED ON THE LEVELING PAD. THE UNITS SHALL BE LEVELLED SIDE-TO-SIDE, FRONT-TO-REAR AND WITH ADJACENT UNITS, AND ALIGNED TO ENSURE INTIMATE CONTACT WITH THE LEVELING PAD. THE FIRST COURSE IS THE MOST IMPORTANT TO ACHIEVE ACCEPTABLE RESULTS. NO GAPS SHALL BE LEFT BETWEEN THE FRONT OR ADJACENT UNITS. ALIGNMENT MAY BE DONE BY MEANS OF A STRING LINE OR OFFSET FROM BASE LINE TO THE BACK OF THE UNITS.
- ALL EXCESS DEBRIS SHALL BE CLEANED FROM TOP OF UNITS AND THE NEXT COURSE OF UNITS INSTALLED ON TOP OF THE UNITS BELOW.
- CONNECTION PINS SHALL BE INSERTED THROUGH THE PIN HOLES OF EACH UPPER-COURSE UNIT INTO RECEIVING SLOTS IN LOWER-COURSE UNITS. PINS SHALL BE FULLY SEATED IN THE PIN SLOT BELOW UNITS SHALL BE PUSHED FORWARD TO REMOVE ANY LOOSENESS IN THE UNIT-TO-UNIT CONNECTION.
- PINS TO PLACEMENT OF NEXT COURSE: THE LEVEL AND ALIGNMENT OF THE UNITS SHALL BE CHECKED AND CORRECTED WHERE NEEDED.
- LAYOUT OF CURVES AND CORNERS SHALL BE INSTALLED IN ACCORDANCE WITH THE WALL PLAN DETAILS OR IN GENERAL ACCORDANCE WITH SRW MANUFACTURER'S INSTALLATION GUIDELINES. WALLS MEETING AT CORNERS SHALL BE INTERLOCKED BY OVERLAPPING SUCCESSIVE COURSES.
- PROCEDURES ABOVE SHALL BE REPEATED UNTIL REACHING TOP OF WALL UNITS, JUST BELOW THE HEIGHT OF THE CAP UNITS. GEOSYNTHETIC REINFORCEMENT, DRAINAGE MATERIALS, AND REINFORCED BACKFILL SHALL BE PLACED IN SEQUENCE WITH UNIT INSTALLATION.
- ALL GEOSYNTHETIC REINFORCEMENT SHALL BE INSTALLED AT THE PROPER ELEVATION AND ORIENTATION AS SHOWN ON THE FINAL, P.E.-SEALED RETAINING WALL PLAN PROFILES AND DETAILS, OR AS DIRECTED BY THE WALL DESIGN ENGINEER.
- AT THE ELEVATIONS SHOWN ON THE FINAL PLANS, (AFTER THE UNITS, DRAINAGE MATERIAL AND BACKFILL HAVE BEEN PLACED TO THIS ELEVATION) THE GEOSYNTHETIC REINFORCEMENT SHALL BE LAID HORIZONTALLY ON COMPACTED INFILL AND ON TOP OF THE CONCRETE SRW UNITS, TO WITHIN 1 INCH OF THE FRONT FACE OF THE UNIT BELOW. EMBEDMENT OF THE GEOSYNTHETIC IN THE SRW UNITS SHALL BE CONSISTENT WITH SRW MANUFACTURER'S RECOMMENDATIONS. CORRECT ORIENTATION OF THE GEOSYNTHETIC REINFORCEMENT SHALL BE AS SHOWN ON THE FINAL WALL PLANS AND IN ACCORDANCE WITH THE GEOSYNTHETIC MANUFACTURER'S RECOMMENDATIONS. THE HIGHEST-STRENGTH DIRECTION OF THE GEOSYNTHETIC MUST BE PERPENDICULAR TO THE WALL FACE.
- GEOSYNTHETIC REINFORCEMENT LAYERS SHALL BE ONE CONTINUOUS PIECE FOR THEIR ENTIRE EMBEDMENT LENGTH. SPLICING OF THE GEOSYNTHETIC IN THE DESIGN-STRENGTH DIRECTION SHALL BE CONSISTENT WITH SRW MANUFACTURER'S RECOMMENDATIONS. THE MINIMUM LENGTH OF THE WALL, HORIZONTALLY ADJACENT SECTIONS OF GEOSYNTHETIC REINFORCEMENT SHALL BE BUTTED IN A MANNER TO ASSURE 100% COVERAGE PARALLEL TO THE WALL FACE.
- TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY ON THE GEOSYNTHETIC REINFORCEMENT. A MINIMUM OF 6 INCHES OF BACKFILL IS REQUIRED PRIOR TO OPERATION OF TRACKED VEHICLES OVER THE GEOSYNTHETIC. TURNING SHOULD BE KEPT TO A MINIMUM. RUBBER-TIRED EQUIPMENT MAY PASS OVER THE GEOSYNTHETIC REINFORCEMENT AT SLOW SPEEDS (LESS THAN 5 MPH).
- THE GEOSYNTHETIC REINFORCEMENT SHALL BE FREE OF WRINKLES PRIOR TO PLACEMENT OF SOIL FILL. THE NOMINAL TENSION SHALL BE APPLIED TO THE REINFORCEMENT AND SECURED IN PLACE WITH STAPLES, STAKES OR BY HAND TENSIONING UNTIL REINFORCEMENT IS COVERED BY 6 INCHES OF FILL.
- DRAINAGE AGGREGATE SHALL BE INSTALLED TO THE LINE, GRADES AND SECTIONS SHOWN ON THE FINAL, P.E.-SEALED RETAINING WALL PLANS. DRAINAGE AGGREGATE SHALL BE PLACED TO THE MINIMUM THICKNESS SHOWN ON THE CONSTRUCTION PLANS BETWEEN AND BEHIND UNITS (A MINIMUM OF 1 CUBIC FOOT FOR EACH EXPOSED SQUARE FOOT OF WALL FACE UNLESS OTHERWISE NOTED ON THE FINAL WALL PLANS).
- DRAINAGE COLLECTION PIPES SHALL BE INSTALLED TO MAINTAIN GRAVITY FLOW OF WATER OUTSIDE THE REINFORCED-SOIL ZONE. THE DRAINAGE COLLECTION PIPE SHALL BE INSTALLED AT THE LOCATIONS SHOWN ON FINAL CONSTRUCTION DRAWINGS. THE DRAINAGE COLLECTION PIPE SHALL HAVE A SLOPE OF ONE ON A SLOPE, AT AN ELEVATION BELOW THE LOWEST POINT OF THE PIPE WITHIN THE AGGREGATE DRAIN. DRAINAGE LATERALS SHALL BE SPACED AT A MAXIMUM 50-FOOT SPACING ALONG THE WALL FACE.
- THE REINFORCED BACKFILL SHALL BE PLACED AS SHOWN IN THE FINAL WALL PLANS. A MINIMUM COMPACTED LIFT THICKNESS OF 6 INCHES AND SHALL BE COMPACTED TO A MINIMUM OF 90% OF STANDARD PROCTOR DENSITY (ASTM D 698) AT A MOISTURE CONTENT WITHIN ±1% POINT TO +3% POINTS OF OPTIMUM. THE BACKFILL SHALL BE PLACED AND SPREAD IN SUCH A MANNER AS TO ELIMINATE WRINKLES OR MOVEMENT OF THE GEOSYNTHETIC REINFORCEMENT AND THE SRW UNIT.
- ONLY HAND-OPERATED COMPACTION EQUIPMENT SHALL BE ALLOWED WITHIN 3 FEET OF THE BACK OF THE WALL UNITS. COMPACTION WITHIN THE 3 FEET BEHIND THE WALL UNITS SHALL BE ACHIEVED BY AT LEAST THREE PASSES OF A LIGHTWEIGHT MECHANICAL TAMPER, PLATE, OR ROLLER.
- AT THE END OF EACH DAY'S OPERATION, THE CONTRACTOR SHALL SLOPE THE LAST LEVEL OF BACKFILL AWAY FROM THE WALL FACING AND BACKFILL AWAY FROM THE WALL FACE.
- AT COMPLETION OF WALL CONSTRUCTION, BACKFILL SHALL BE PLACED LEVEL WITH FINAL TOP OF WALL ELEVATION. IF FINAL GRADING, PAVING, LANDSCAPING AND/OR STORM DRAINAGE INSTALLATION ADJACENT TO THE WALL IS NOT PLACED IMMEDIATELY AFTER WALL COMPLETION, TEMPORARY GRADING AND DRAINAGE SHALL BE PROVIDED TO ENSURE WATER RUNOFF IS NOT DIRECTED AT THE WALL NOR ALLOWED TO COLLECT OR POND BEHIND THE WALL UNTIL FINAL CONSTRUCTION ADJACENT TO THE WALL IS COMPLETED.
- SRW CAPS SHALL BE PROPERLY ALIGNED AND GLOUED TO UNDERLYING UNITS WITH VERSA-LOK ADHESIVE. A FLEXIBLE, HIGH-STRENGTH CONCRETE ADHESIVE. RIGID ADHESIVE OR MORTAR ARE NOT ACCEPTABLE.
- CAPS SHALL OVERHANG THE TOP COURSE OF UNITS BY 3/4 INCH TO 1 INCH. SLIGHT VARIATION IN OVERHANG IS ALLOWED TO CORRECT ALIGNMENT AT THE TOP OF THE WALL.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT CONSTRUCTION BY OTHERS ADJACENT TO THE WALL DOES NOT DISTURB THE WALL OR PLACE TEMPORARY CONSTRUCTION LOADS ON THE WALL THAT EXCEED DESIGN LOADS, INCLUDING LOADS SUCH AS WATER PRESSURE, TEMPORARY CRADLES, OR EQUIPMENT



PLANT SCHEDULE:

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	NOTES
Dec. Trees						
Ame / Aut	7	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	1 1/2"-2"	BB	
Mal / Tin	3	Malus sargentii 'Tina'	Tina Crabapple	1 1/2"-2"	BB	
Til / Ste	6	Tilia tomentosa 'Sterling' PP 6511	Sterling Linden	2 1/2"-3"	BB	
Que / rub	4	Quercus rubra	Red Oak	2 1/2"-3"	BB	
Ulm / Fro	9	Ulmus 'Frontier'	Frontier Elm	2 1/2"-3"	BB	
Ev. Tree						
Pic / gla	3	Picea glauca	White Spruce	6' - 7' ht	BB	
Pin / Wat	6	Pinus sylvestris 'Watereri'	Waterer Scots Pine	4' - 5' ht	BB	
Ev. Shrubs						
Jun / Kal	14	Juniperus chinensis 'Pfitzeriana Kallay'	Kallays Compact Juniper	18" - 24"	Cont	
Jun / Sea	3	Juniperus chinensis 'Sea Green'	Sea Green Juniper	24" - 30"	Cont	
Tax / Hic	4	Taxus x media 'Hicksii'	Hicks Yew	24" - 30"	Cont	
Tax / Tau	12	Taxus x media 'Tauntonii'	Taunton Yew	18" - 24"	Cont	
Dec. Shrub						
Cor / All	14	Cornus sericea 'Alleman's Compact'	Alleman's Compact Dogwood	18" - 24"	Cont	
Phy / Sno	3	Physocarpus opulifolius 'Snowfall'	Snowfall Ninebark	24" - 30"	Cont	
Rhu / Gro	39	Rhus aromatica 'Gro-low'	Gro-low Sumac	2 gallon	Cont	
Rhu / typ	16	Rhus typhina	Staghorn Sumac	5 gallon	Cont	
Vib / Red	7	Viburnum dentatum 'J.N. Select'	Red Feather Arrowwood Viburnum	30" - 36"	Cont	
Ornamental Grasses						
Cal / Kar	39	Calamagrostis acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	1 gallon	Cont	
Sch / sco	36	Schizachyrum scorparium	Little Bluestem	1 gallon	Cont	
Groundcovers						
Pac / Gre	1074	Pachysandra terminalis 'Green Carpet'	Green Carpet Pachysandra	4"	Cont	Spacing - 8" O.C.

LANDSCAPE NOTES

LANDSCAPE INSTALLATION:

- All written dimensions supersede scaled dimensions.
- The Contractor shall verify location of all underground utilities and additional information prior to commencement of site construction.
- Rough grading and drainage construction is to be completed prior to Landscape Contractor's work. Verify all existing site and grading conditions prior to construction.
- All work shall be in conformance with all applicable local codes and ordinances.
- All areas disturbed by grading or site construction shall be fine graded, planted, or seeded. See Plan for seed locations. See notes for specified seed mixes and installation procedures.
- Contractor shall verify plant quantities shown on the Plan and provide a list to the Client identifying the species and sizes to be used throughout the project. The Landscape Architect or Owner's Representative reserves the right to reject any substandard planting material. Rejected material shall be removed from the project site immediately.
- All planting beds and turf grass areas shall receive a blended topsoil mix to a depth of six (6) inches. Contractor shall provide positive drainage away from all buildings for a minimum of ten (10) feet. Roto-til blended topsoil into existing soil.
- Soil preparation for perennial and groundcover planting beds shall be as follows:
 - Remove all roots, lumps, stones, sod and other extraneous materials harmful or toxic to plant growth.
 - Perennial and groundcover planting beds shall receive a twelve (12) inch mixture consisting of 8" blended topsoil, four (4) inch Purple Cow Classic compost (Purple Cow Organics, LLC (608) 831-0349) or approved equal. Add 1/2 lb. of 5-10-5 garden fertilizer per 100 square feet and roto-til amendments into the planting bed. Avoid damage to existing tree roots where applicable by lightly working amendments into soil with pitch fork.
 - Mix amended planting soil either prior to planting or apply on surface of planting bed and mix thoroughly before planting.
 - Grade, rake, and roll planting bed with roller weighing not less than 25 lbs. or more than 100 lbs. per linear foot so as to leave in condition to plant.
 - Grade planting bed to a twelve (12) inch crown at center.
- All perennial or groundcover areas shall receive a two (2) inch layer of shredded bark mulch. All shrub and tree planting beds shall receive a three (3) inch layer of shredded bark mulch. Do not allow mulch to touch stems or trunks of perennials, shrubs, or trees. Unless otherwise noted, no landscape fabric or weed barrier is to be installed.
- Unless otherwise shown, all perennials and shrubs to be planted in a triangular arrangement. For plants not shown individually, refer to spacing shown in the plant schedule.
- Plant Bed Edging - Install a shovel-cut bed edge to six (6) inch depth at perimeter of bed.
- Unless otherwise noted, do not stake deciduous trees less than or equal to 2.5-inches caliper diameter at breast height (D.B.H.) and evergreen trees less than or equal to 6-feet in height.

SEED MIXES:

SEEDED TURF FOR LAWN AREAS:

Sow at 5 lbs. / 1,000 sq. ft.
 "Supreme Lawn Seed Mix"
 Available from Reinders, Inc. (800) 785-3301, or approved equal.
 To be installed and maintained per supplier's specifications.

17% Mercury Kentucky Bluegrass 16% America Kentucky Bluegrass
 17% SR 2100 Kentucky Bluegrass 25% Garnet Creeping Red Fescue
 15% Replicator Perennial Ryegrass 10% TXR Annual Ryegrass

NATIVE SEED MIX FOR STORM WATER BASINS (wet mesic to mesic):

Sow at 6 PLS lbs. per acre
 "Stormwater Biofiltration", Item # SWB
 Available from Agrecol Native Nursery, (608) 223-3571, or approved equal. To be installed and maintained per supplier's specifications.

DEVELOPER:



833 East Michigan Street Suite 400,
 Milwaukee, Wisconsin 53202
 414.443.0700

Consultant:



255 North 21st Street Milwaukee, Wisconsin 53233
 414.475.5554 414.475.5299 fax harwood@hec.com
 HEC Project Number: 160042.00

Consultant:



1300 West Canal Street Milwaukee, Wisconsin 53233
 414.643.4200 414.643.4210 fax
 www.sigmagroup.com

Project:

The Waters II

Core & Shell

Location:

11011 W Park Place,

Milwaukee, WI

Key Plan:

Construction Documents

Sheet:

LANDSCAPE PLAN

Scale:

1" = 30'

Revisions:

No.	Date	Description

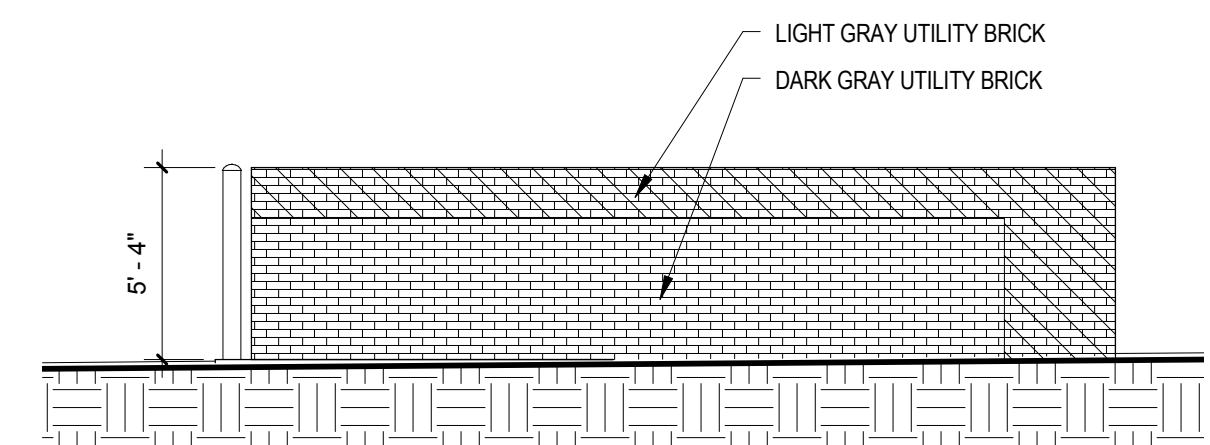
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07/14/2017

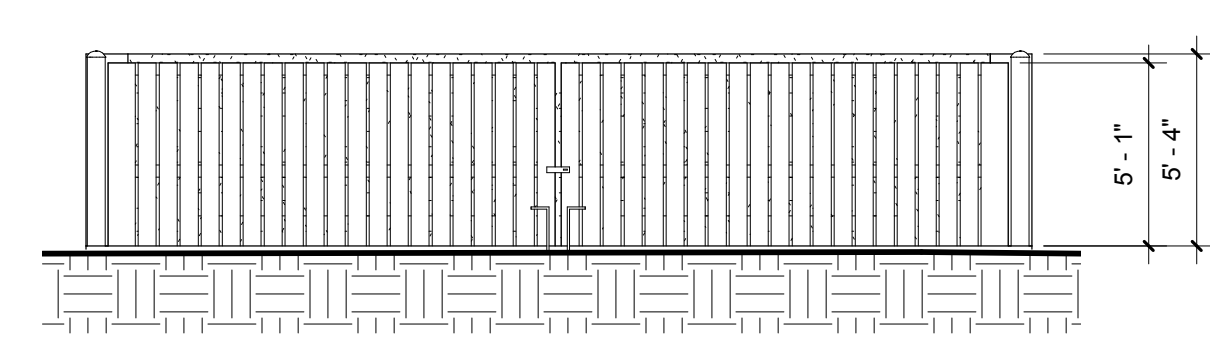
Project No:

170025.00

Sheet No:



2 DUMPSTER ENCLOSURE - SOUTH
3/16" = 1'-0"



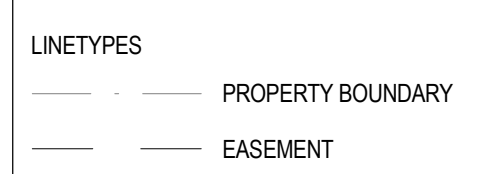
3 DUMPSTER ENCLOSURE - WEST
3/16" = 1'-0"

GENERAL SITE CONSTRUCTION NOTES:

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL NECESSARY PERMITS.
- THE TEMPORARY LOADING DOCK IDENTIFIED ON SHEET A1.016P1 SHALL REMAIN OPERATIONAL DURING ALL CONSTRUCTION ACTIVITIES.
- THE EXIT PATHS LEAVING UWHC AND WMR, IDENTIFIED ON SHEET A1.016A SHALL REMAIN OPEN AND PROTECTED DURING ALL CONSTRUCTION ACTIVITIES.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL EROSION CONTROL IMPLEMENTATION AND MAINTENANCE SHALL COMPLY WITH THE CITY OF MADISON'S EROSION, SEDIMENT, AND STORM WATER CONTROL REGULATIONS AS WELL AS COUNTY, STATE, AND FEDERAL REQUIREMENTS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY FOR THE DESIGN AND IMPLEMENTATION OF ALL SOIL RETENTION, SHORING AND RESHORING.
- SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. SOIL STABILIZATION MEASURES SHALL CONSIDER THE TIME OF YEAR, SITE CONDITIONS AND THE USE OF TEMPORARY OR PERMANENT MEASURES.
- SOIL EROSION AND SEDIMENT CONTROL FEATURES SHALL BE CONSTRUCTED PRIOR TO THE COMMENCEMENT OF HYDROLOGIC DISTURBANCE OF UPLAND AREAS.
- DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN 14 CALENDAR DAYS OF THE END OF ACTIVE HYDROLOGIC DISTURBANCE, OR REDISTURBANCE.
- ALL STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY AN APPROPRIATE SEDIMENT CONTROL MEASURE.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.
- A STABILIZED MAT OF AGGREGATE UNDERLAIN WITH FILTER CLOTH (OR OTHER APPROPRIATE MEASURE) SHALL BE LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A PUBLIC RIGHT-OF-WAY, STREET, ALLEY, OR PARKING AREA. ANY SOIL OR SEDIMENT REACHING A PUBLIC RIGHT-OF-WAY, STREET, ALLEY, OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
- SOIL STOCKPILES SHALL NOT BE LOCATED IN A FLOOD PRONE AREA OR A DESIGNATED BUFFER PROTECTING WATERS OF THE UNITED STATES OR ISOLATED WATERS OF DADE COUNTY.
- IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION. DISCHARGE SHALL BE ROUTED THROUGH AN EFFECTIVE SEDIMENT CONTROL MEASURE (E.G. SEDIMENT TRAP, SEDIMENT BASIN, OR OTHER APPROPRIATE MEASURE).
- THE EROSION CONTROL MEASURES INDICATED ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER OR GOVERNING AGENCY.
- EXCAVATED MATERIAL NOT SUITABLE FOR BACKFILLING SHALL BE DISPOSED OFF-SITE.

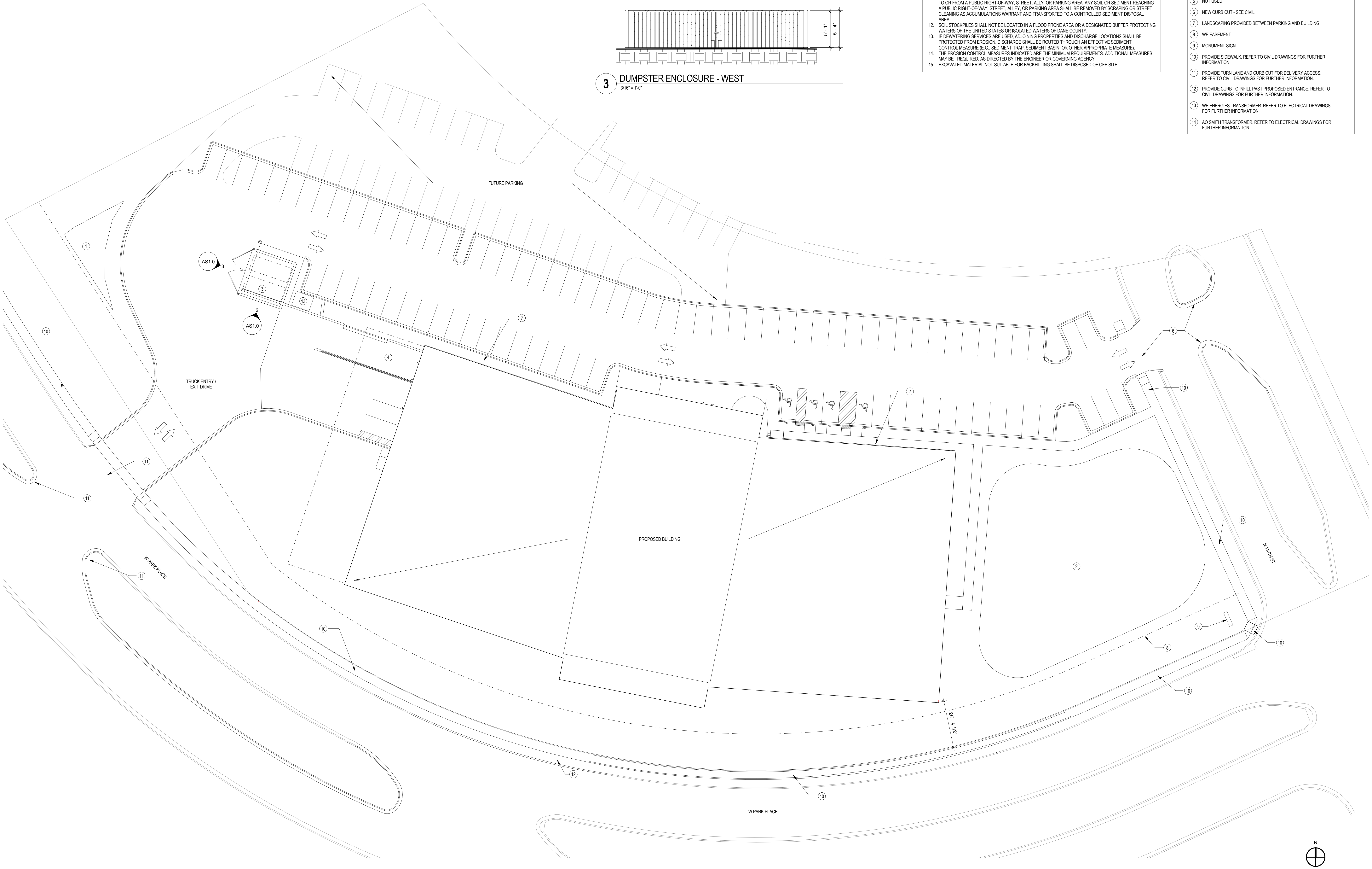
GENERAL NOTES:

- THIS SITE PLAN REFLECTS THE BUILDING AND HARD SURFACE CONFIGURATION OF THE PROJECT SITE. SEE CIVIL DRAWINGS FOR SPECIFIC GRADES, DIMENSIONS, CALCULATIONS, AND ASSOCIATED SITE DETAILS.



KEYED NOTES:

- STORMWATER DETENTION POND - SEE CIVIL
- STORMWATER RETENTION POND - SEE CIVIL
- CMU BACKLIP & UTILITY BRICK DUMPSTER ENCLOSURE
- LOADING DOCK RAMP
- NOT USED
- NEW CURB CUT - SEE CIVIL
- LANDSCAPING PROVIDED BETWEEN PARKING AND BUILDING
- WE EASEMENT
- MONUMENT SIGN
- PROVIDE SIDEWALK. REFER TO CIVIL DRAWINGS FOR FURTHER INFORMATION.
- PROVIDE TURN LANE AND CURB CUT FOR DELIVERY ACCESS. REFER TO CIVIL DRAWINGS FOR FURTHER INFORMATION.
- PROVIDE CURB TO INFILL PAST PROPOSED ENTRANCE. REFER TO CIVIL DRAWINGS FOR FURTHER INFORMATION.
- WE ENERGIES TRANSFORMER. REFER TO ELECTRICAL DRAWINGS FOR FURTHER INFORMATION.
- AO SMITH TRANSFORMER. REFER TO ELECTRICAL DRAWINGS FOR FURTHER INFORMATION.



1 ARCHITECTURAL SITE PLAN
1" = 20'-0"

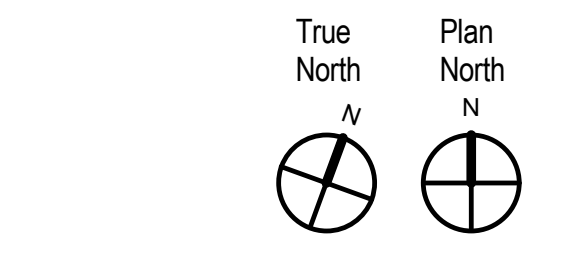
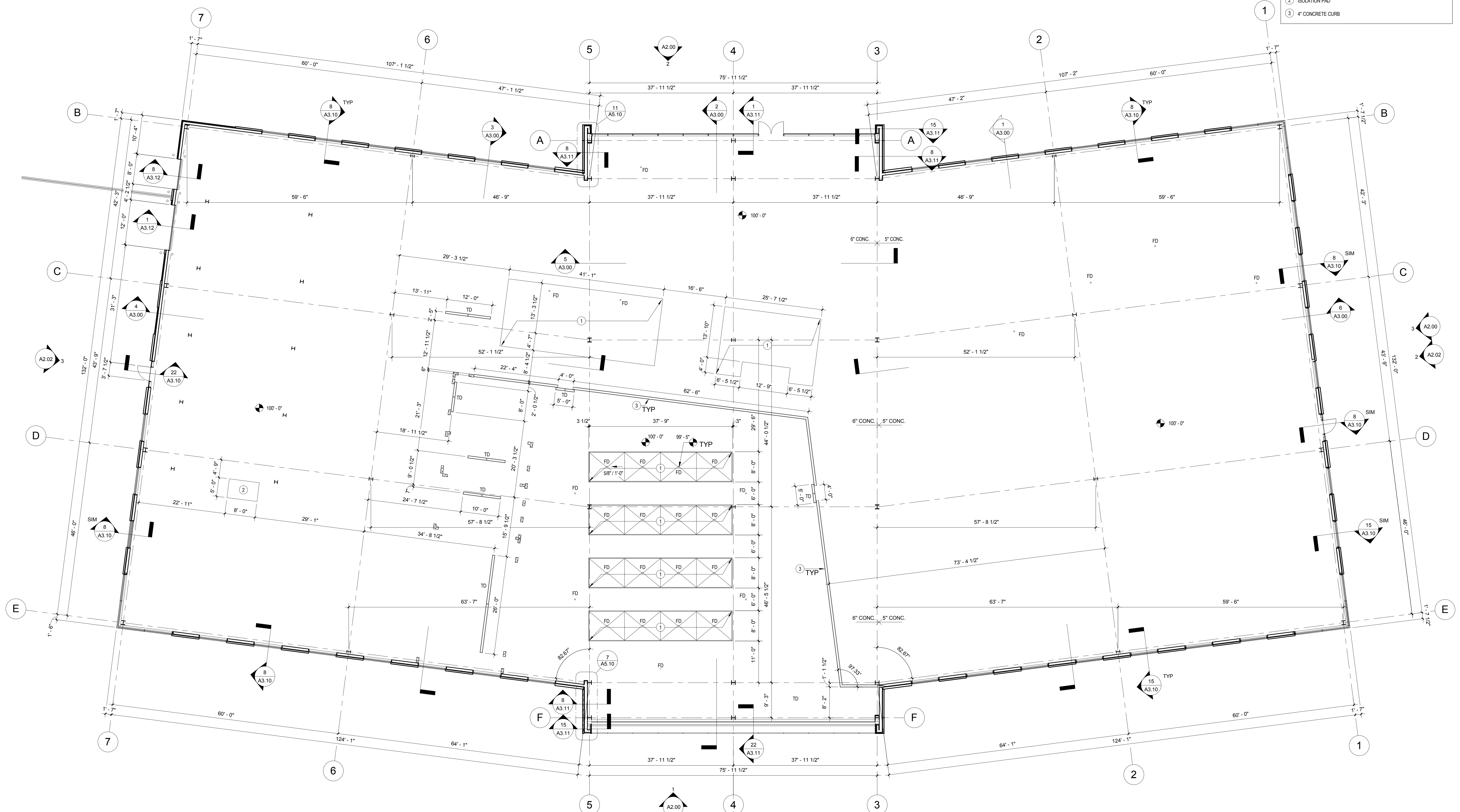
No.	Date	Description

GENERAL PLAN NOTES:

- 1) ARCHITECTURAL LEVEL 1 ELEVATION 100'-0" IS EQUAL TO 186.5' ON THE CIVIL DRAWINGS
- 2) SEE SHEET G-100 FOR CODE / REGULATORY INFORMATION, ABBREVIATIONS AND SYMBOLS.
- 3) FOR CLARITY OF THE DRAWINGS, FIREPROOFING HAS NOT BEEN SHOWN ON THE PLANS. HOURLY RATINGS FOR STRUCTURAL COMPONENTS IS TO BE PROVIDED AS PER SHEET G-100
- 4) CONTRACTOR IS REQUIRED TO MEET THE CONSTRUCTION CRITERIA FOR EXTERIOR WALL ASSEMBLIES AS SPECIFIED BY THE CURRENT INDEPENDENT TESTING AGENCIES FIRE RESISTANCE DIRECTORY.
- 5) CONTRACTOR SHALL REFER TO GEOTECHNICAL ENGINEER'S SOILS REPORT DATED MARCH 2nd 2001 FOR ADDITIONAL INFORMATION.
- 6) CONTRACTOR SHALL PROVIDE EROSION AND SEDIMENT CONTROL PER CIVIL DRAWINGS.
- 7) PRIOR TO POURING FOOTINGS, THE FOOTINGS AND FOUNDATION EXCAVATION SHALL BE INSPECTED BY A SOILS ENGINEER. IN CONDITIONS OF SUSPECTED FILL, EXPANSIVE SOILS, OR ANY GEOLOGIC INSTABILITY, NOTIFY THE ARCHITECT IN WRITING IMMEDIATELY, AND PRIOR TO ANY WORK OR ORDERING OF MATERIALS.
- 8) THE CONTRACTOR SHALL FIELD VERIFY THE EXISTENCE AND LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK. EXERCISE CARE TO PROTECT EXISTING UTILITIES. EXCAVATION NEAR EXISTING UTILITIES SHALL BE PERFORMED BY HAND.
- 9) DAMAGE TO EXISTING SITE COMPONENTS IS THE CONTRACTOR'S RESPONSIBILITY.
- 10) ALL FOUNDATION WALLS TO BE WATERPROOFED. SEE SPECIFICATION SECTIONS 07135 AND 07140. PROVIDE PER MANUFACTURER'S DETAILS AND RECOMMENDATIONS. COORDINATE WITH STRUCTURAL FOR INSTALLATION AND PRODUCT SELECTION.
- 11) ARCHITECT TO REVIEW AND APPROVE PHYSICAL LAYOUT OF COLUMN / FOOTING LOCATIONS PRIOR TO PLACEMENT.
- 12) BELOW SLAB VAPOR BARRIER TO BE CONTINUOUS. WRAP ANY VERTICAL SURFACES PER MANUFACTURER'S REQUIREMENTS.
- 13) LIGHT GAGE STEEL FRAMING FOR EXTERIOR WALL ASSEMBLY TO BE 6" 16 GAGE STUDS, UNO. SEE STRUCTURAL FOR LIGHT GAUGE REQUIREMENTS. LIGHT GAUGE FRAMING CONTRACTOR TO PRODUCE ALL REQUIRED SEALED DESIGN DRAWING TO CITY OF MILWAUKEE FOR REVIEW.
- 14) COORDINATE ALL ROOF CONDUCTORS, FLOOR DRAINS, TRENCH DRAINS, AND ALL SUB-SLAB PLUMBING LINES WITH ASSOCIATED STRUCTURAL AND PLUMBING DRAWINGS.
- 15) EXTEND ALL WALL COMPONENTS TO STRUCTURAL DECK ABOVE UNLESS NOTED OTHERWISE.
- 16) COORDINATE REQUIRED BLOCKING HEIGHT FOR SYSTEMS FURNITURE, CASEWORK, FIRE EXTINGUISHER CABINETS, ELECTRICAL PANELS, TOILET ROOM ACCESSORIES, ETC.

KEYNOTES:

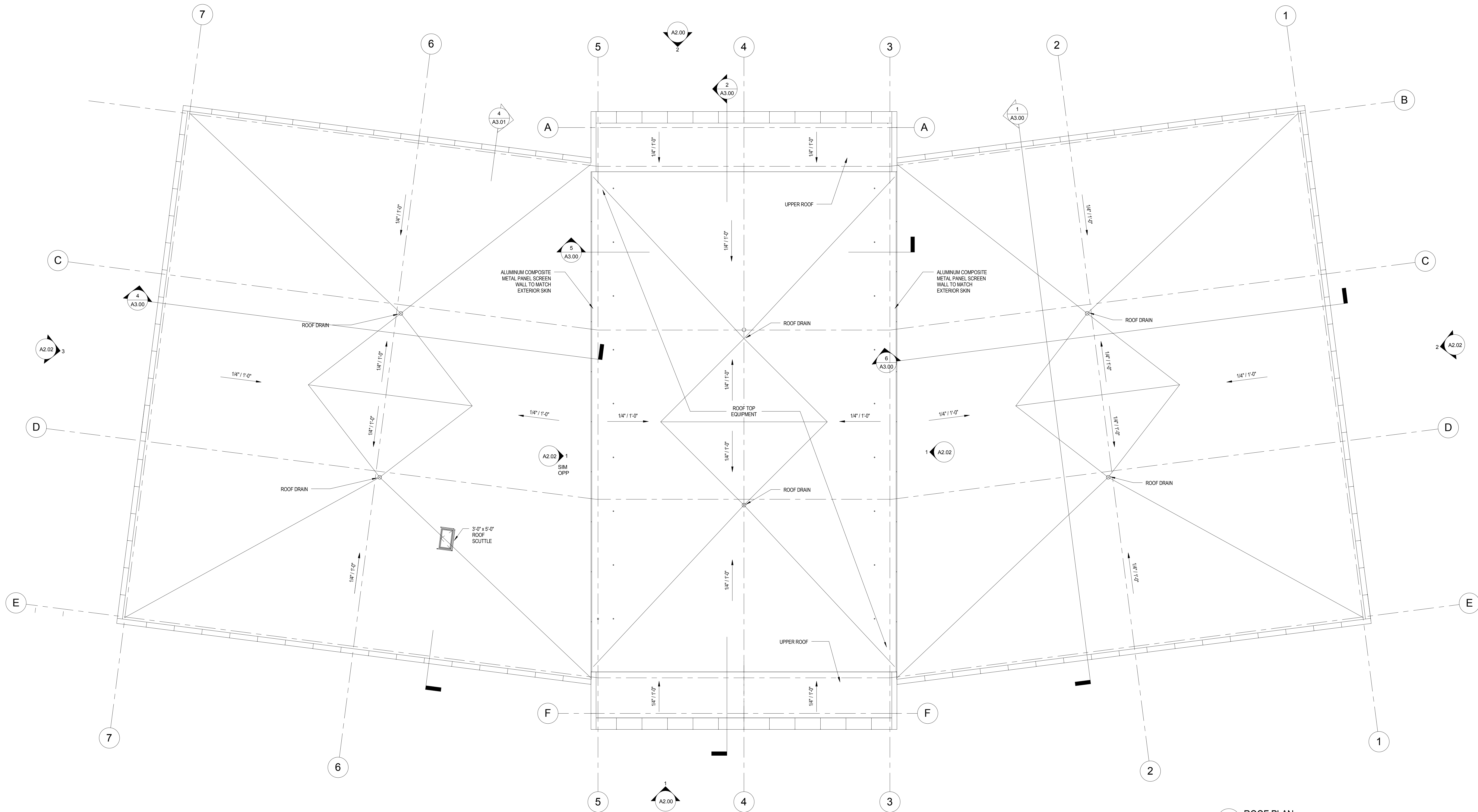
- 1 FLOOR RECESS
- 2 ISOLATION PAD
- 3 4" CONCRETE CURB



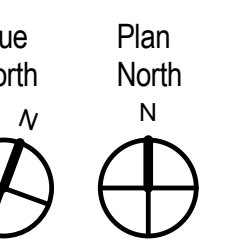
Scale:
As indicated

Revisions:

No.	Date	Description

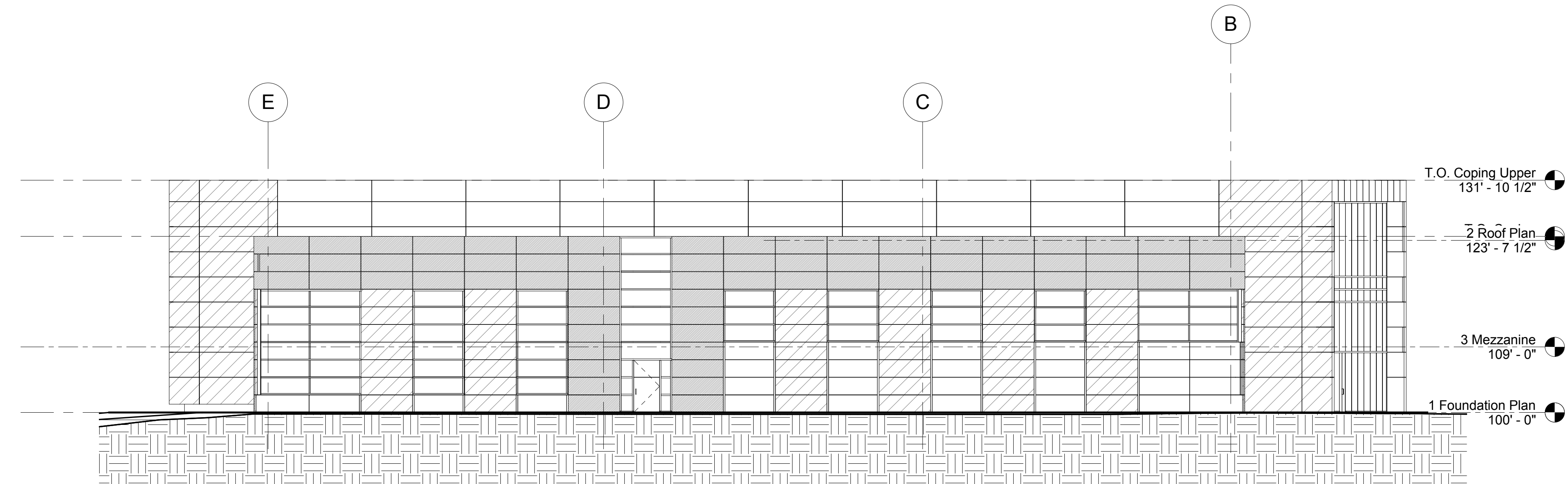


1 ROOF PLAN
3/32" = 1'-0"

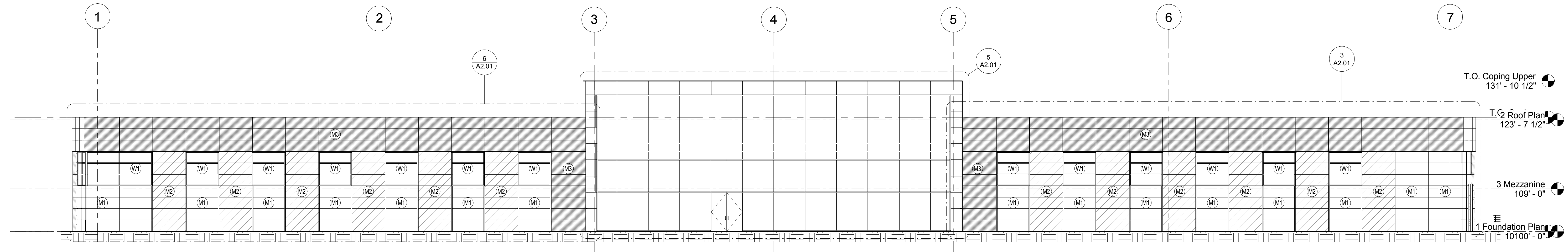


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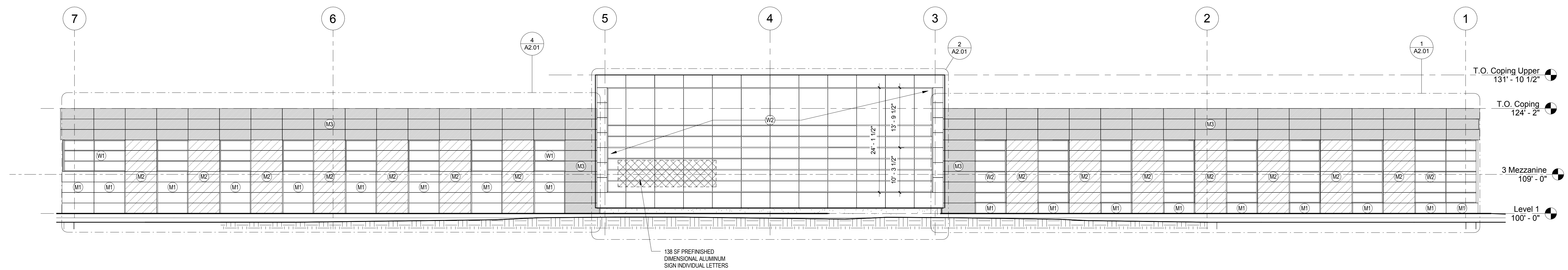
Key Value	BUILDING SYSTEM AND ASSEMBLIES
M1	COMPOSITE MTL. PANEL RAINSCREEN SYSTEM COLOR #01 2.5" PROJECTION FROM WALL PLANE. BACKUP FRAMING SYSTEM ATTACHED TO 5/8" DENSEGLASS COVERED WITH SPRAY ON WATERPROOFING. SUPPORTING METAL STUD WALL SYSTEM TO BE SUPPORTED BY FOUNDATION WALL AT BASE OR STEEL SUPPORT PLATES AT INTERMEDIATE POINTS.
M2	COMPOSITE MTL. PANEL RAINSCREEN SYSTEM COLOR #01 4.5" PROJECTION FROM WALL PLANE. BACKUP FRAMING SYSTEM ATTACHED TO 5/8" DENSEGLASS COVERED WITH SPRAY ON WATERPROOFING. SUPPORTING METAL STUD WALL SYSTEM TO BE SUPPORTED BY FOUNDATION WALL AT BASE OR STEEL SUPPORT PLATES AT INTERMEDIATE POINTS.
M3	COMPOSITE MTL. PANEL RAINSCREEN SYSTEM COLOR #02 6.5" PROJECTION FROM WALL PLANE. BACKUP FRAMING SYSTEM ATTACHED TO 5/8" DENSEGLASS COVERED WITH SPRAY ON WATERPROOFING. SUPPORTING METAL STUD WALL SYSTEM TO BE SUPPORTED BY FOUNDATION WALL AT BASE OR STEEL SUPPORT PLATES AT INTERMEDIATE POINTS.
W1	ALUMINUM STOREFRONT WINDOW SYSTEM W/ LOW-E TINTED GLASS IN PLANE W/MTL. PANEL LIND (BASIS OF DESIGN: KAWNEER TRIFAB VG 451T)
W2	ALUMINUM CURTAIN WALL W/ LOW-E TINTED GLASS (BASIS OF DESIGN: KAWNEER 1600 WALL SYSTEM ? HORIZONTAL MULLIONS TO HAVE STANDARD 1 1/4" OR 2 1/2" MILLION CAPS. VERTICAL MULLIONS TWO-SIDED STRUCTURAL GLAZED.)



3 COMPOSED EAST ELEVATION (SKEWED)
3/32" = 1'-0"



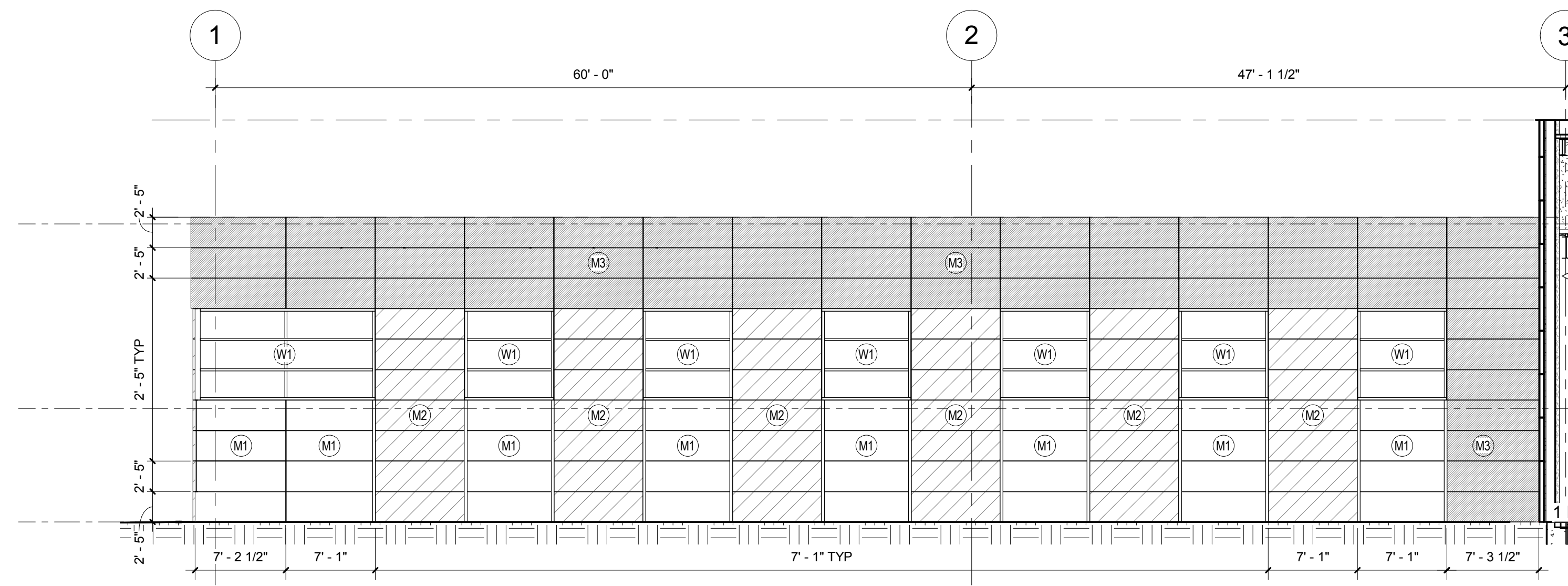
2 COMPOSED NORTH ELEVATION
3/32" = 1'-0"



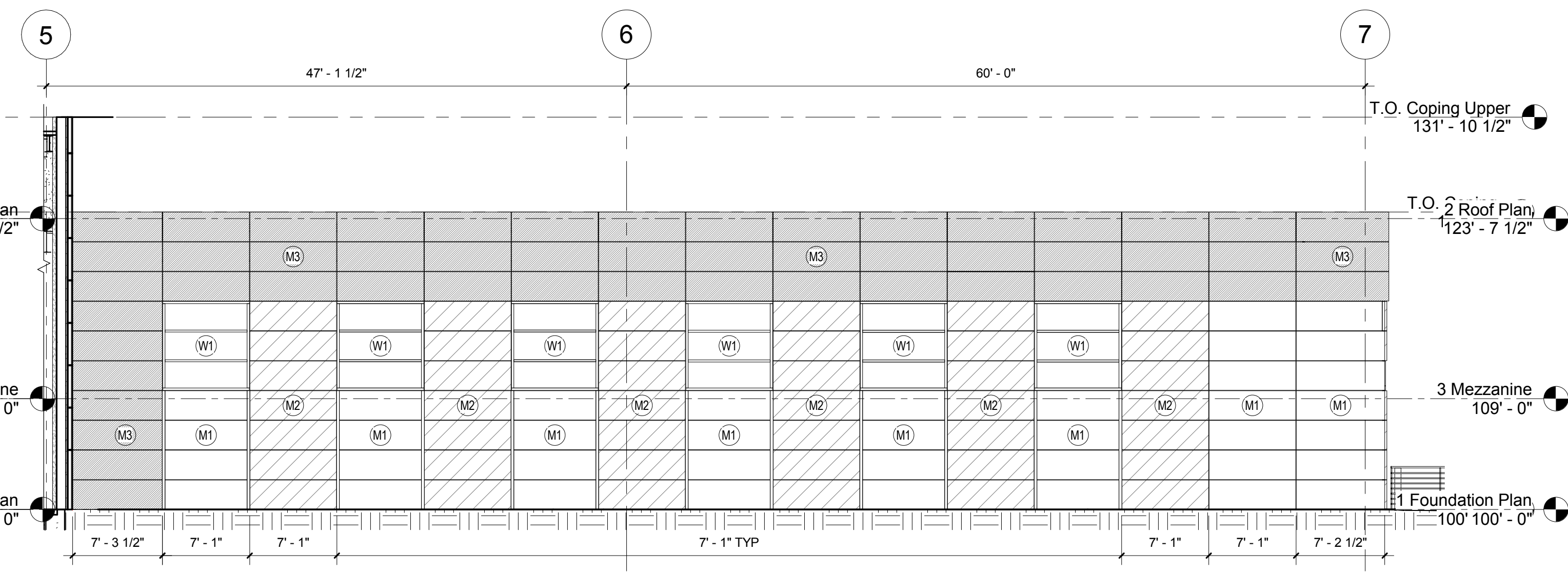
1 COMPOSED SOUTH ELEVATION
3/32" = 1'-0"

No.	Date	Description

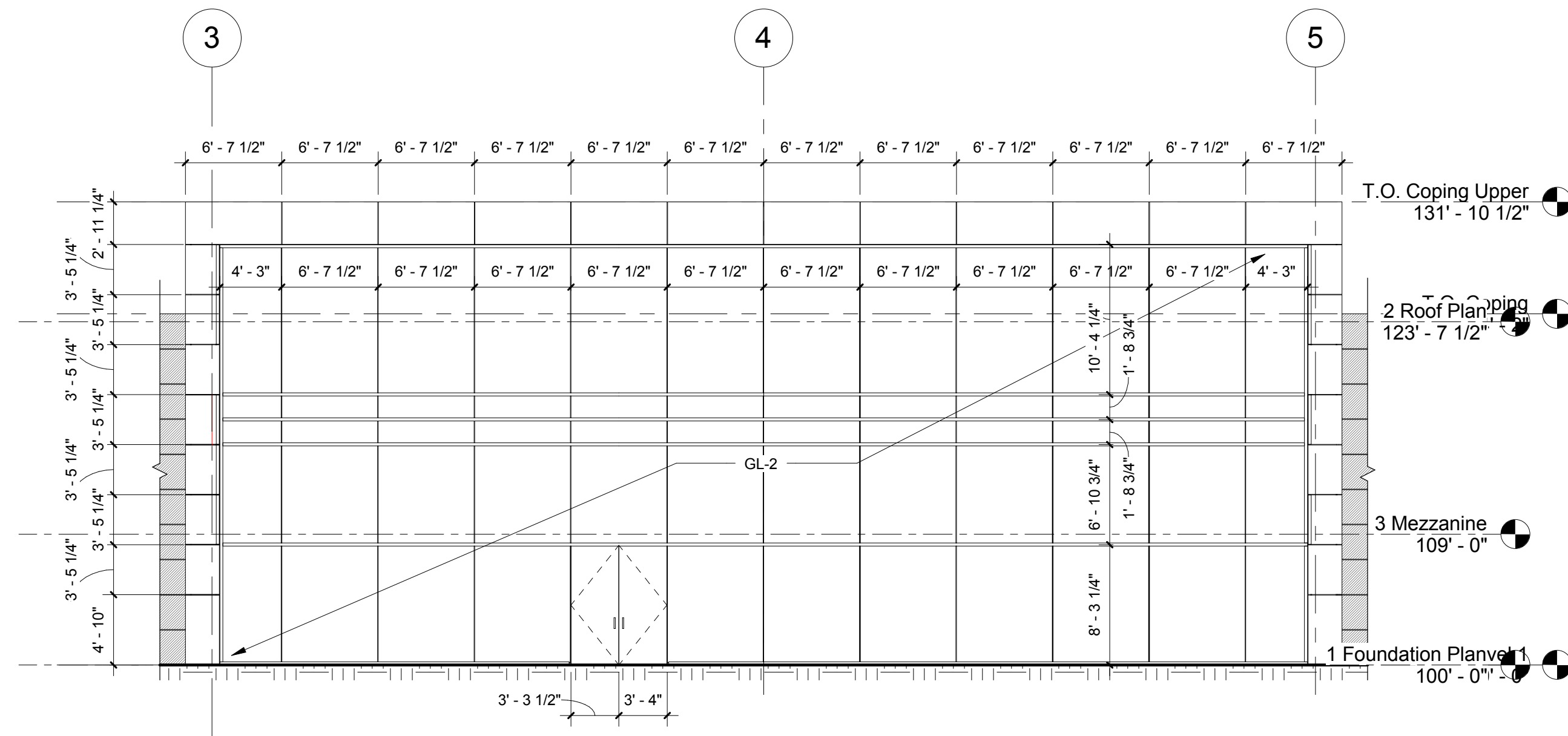
Key Value	BUILDING SYSTEM AND ASSEMBLIES
M1	COMPOSITE MTL. PANEL RANSREEN SYSTEM COLOR #01 2.5" PROJECTION FROM WALL PLANE. BACKUP FRAMING SYSTEM ATTACHED TO 5/8" DENSEGLASS COVERED WITH SPRAY ON WATERPROOFING. SUPPORTING METAL STUD WALL SYSTEM TO BE SUPPORTED BY FOUNDATION WALL AT BASE OR STEEL SUPPORT PLATES AT INTERMEDIATE POINTS.
M2	COMPOSITE MTL. PANEL RANSREEN SYSTEM COLOR #01 4.5" PROJECTION FROM WALL PLANE. BACKUP FRAMING SYSTEM ATTACHED TO 5/8" DENSEGLASS COVERED WITH SPRAY ON WATERPROOFING. SUPPORTING METAL STUD WALL SYSTEM TO BE SUPPORTED BY FOUNDATION WALL AT BASE OR STEEL SUPPORT PLATES AT INTERMEDIATE POINTS.
M3	COMPOSITE MTL. PANEL RANSREEN SYSTEM COLOR #03 6.5" PROJECTION FROM WALL PLANE. BACKUP FRAMING SYSTEM ATTACHED TO 5/8" DENSEGLASS COVERED WITH SPRAY ON WATERPROOFING. SUPPORTING METAL STUD WALL SYSTEM TO BE SUPPORTED BY FOUNDATION WALL AT BASE OR STEEL SUPPORT PLATES AT INTERMEDIATE POINTS.
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W2	ALUMINUM CURTAIN WALL W/ LOW-E TINTED GLASS (BASIS OF DESIGN: KAWNEER 1600 WALL SYSTEM 2. HORIZONTAL MULLIONS TO HAVE STANDARD 1 1/4" OR 2 1/2" MULLION CAPS. VERTICAL MULLIONS TWO-SIDED STRUCTURAL GLAZED.)



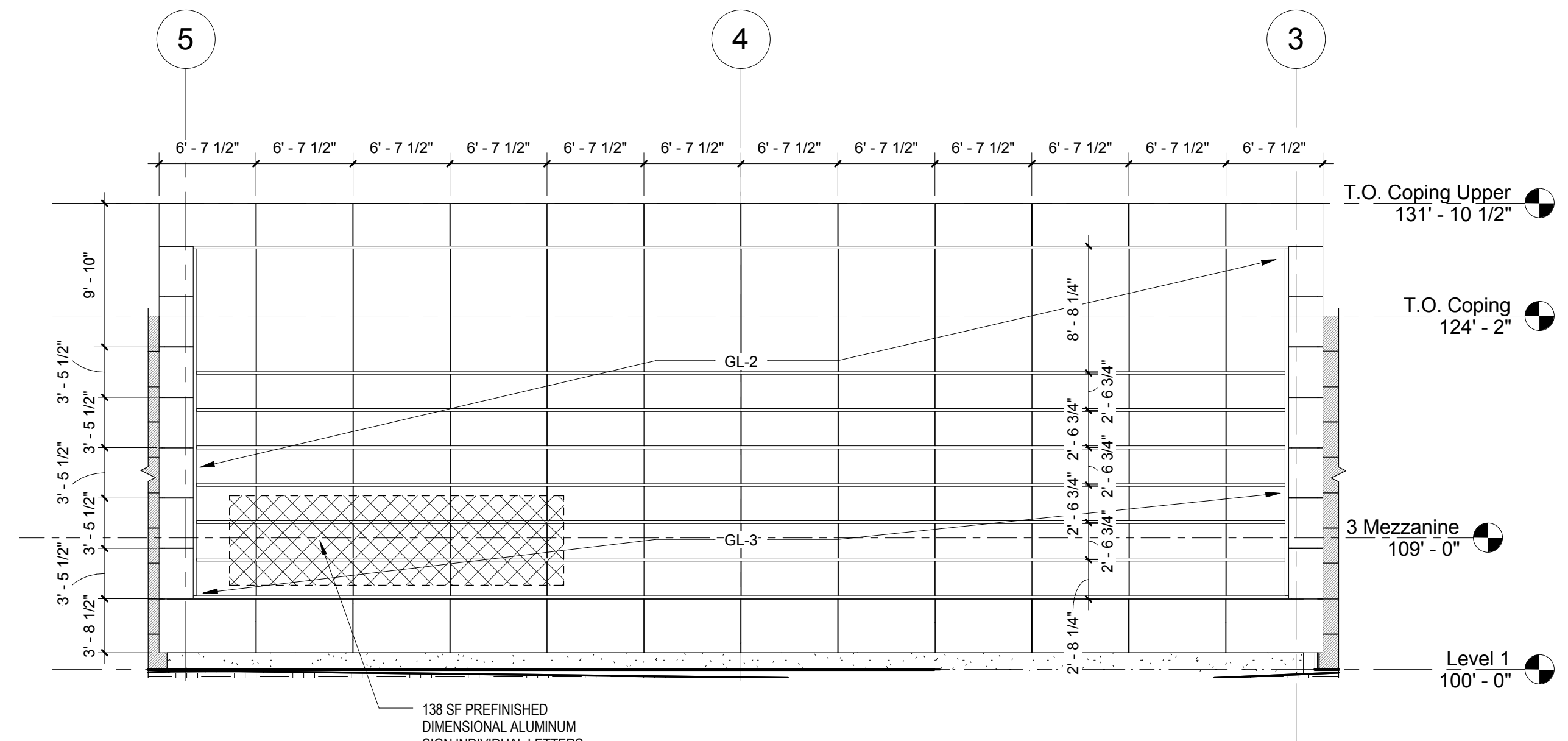
6 NORTH ELEVATION - EAST
1/8" = 1'-0"



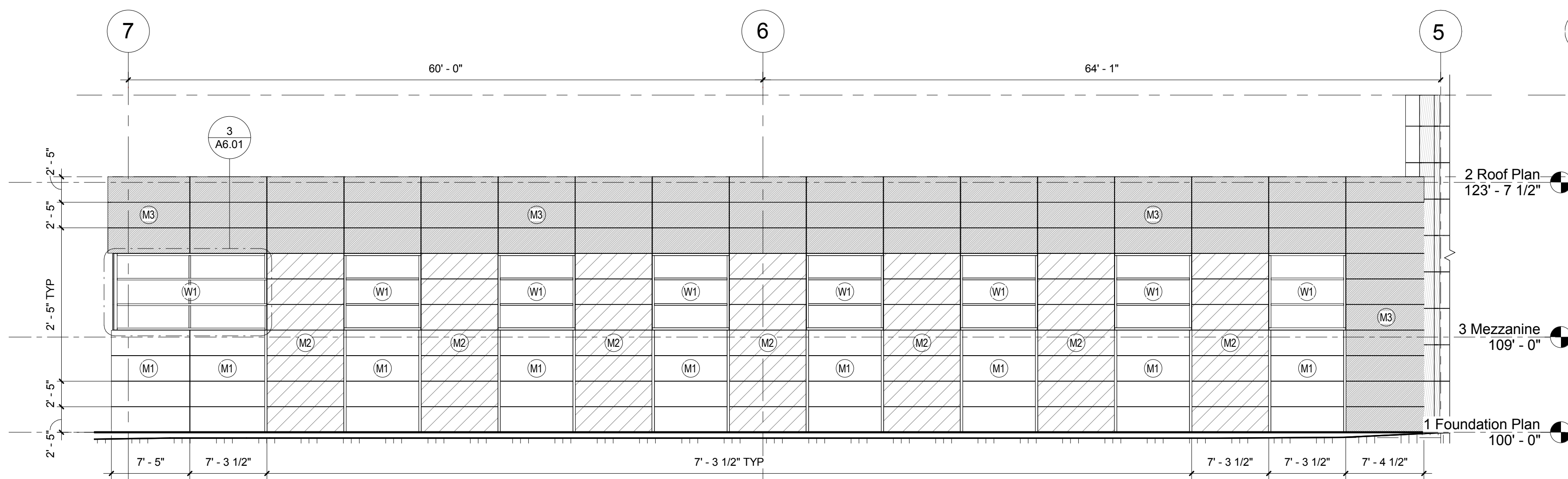
3 NORTH ELEVATION - WEST
1/8" = 1'-0"



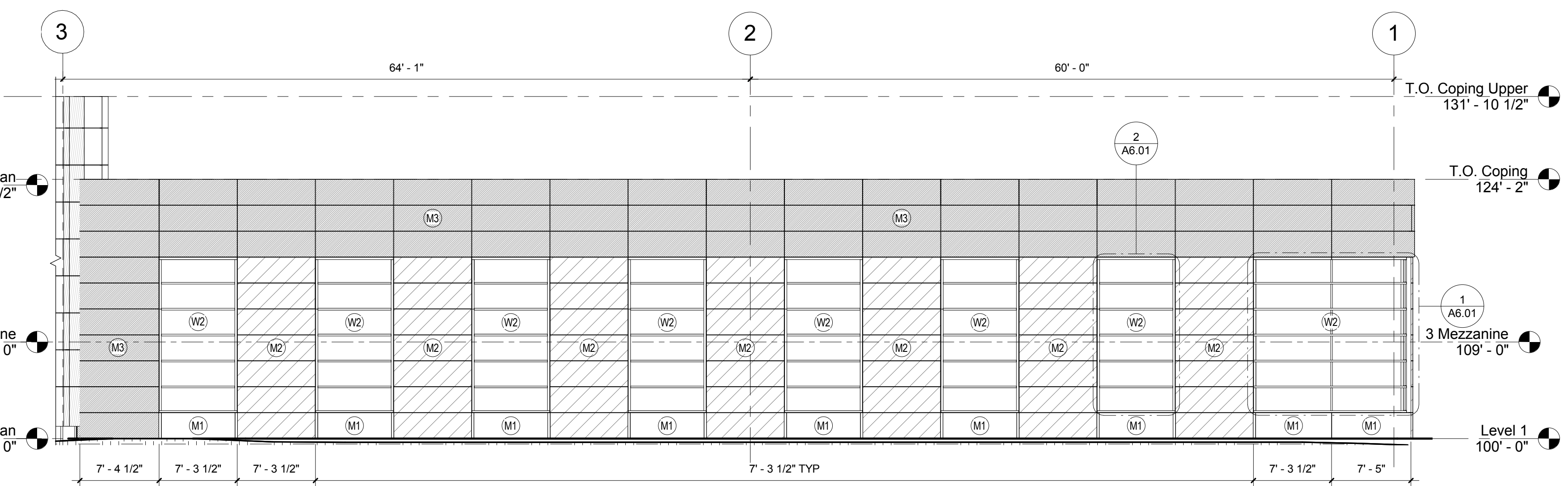
5 NORTH ELEVATION - CENTER
1/8" = 1'-0"



2 SOUTH ELEVATION - CENTER
1/8" = 1'-0"



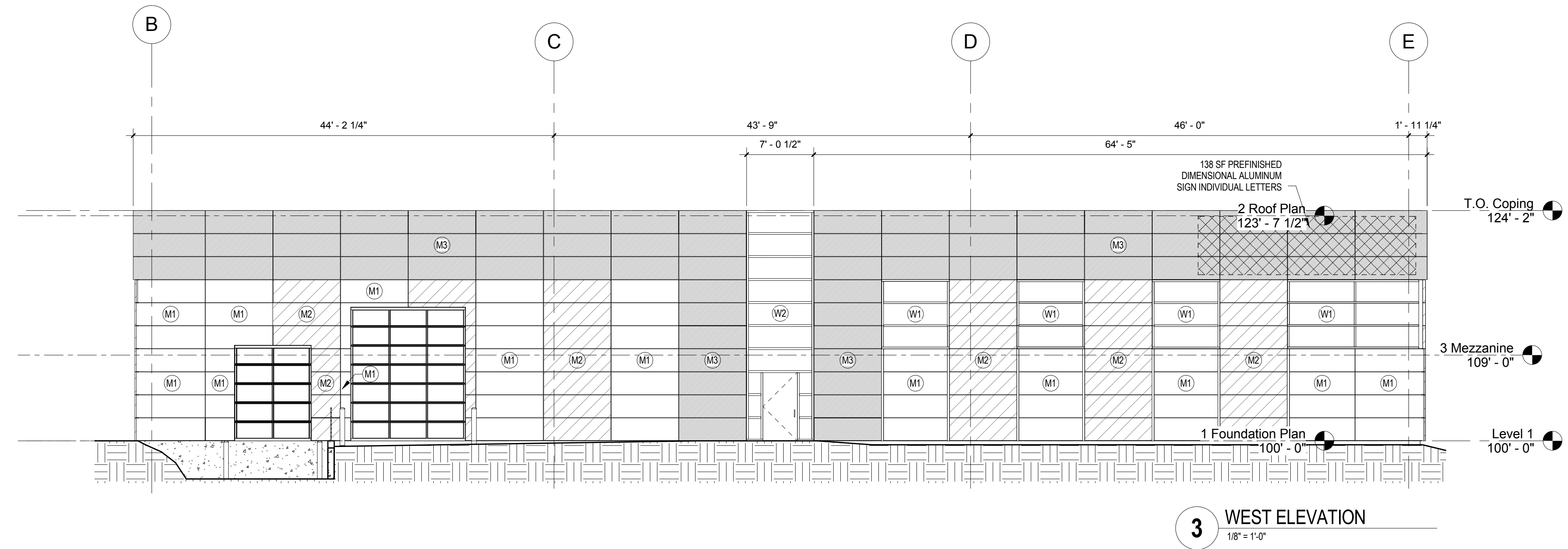
4 SOUTH ELEVATION - WEST
1/8" = 1'-0"



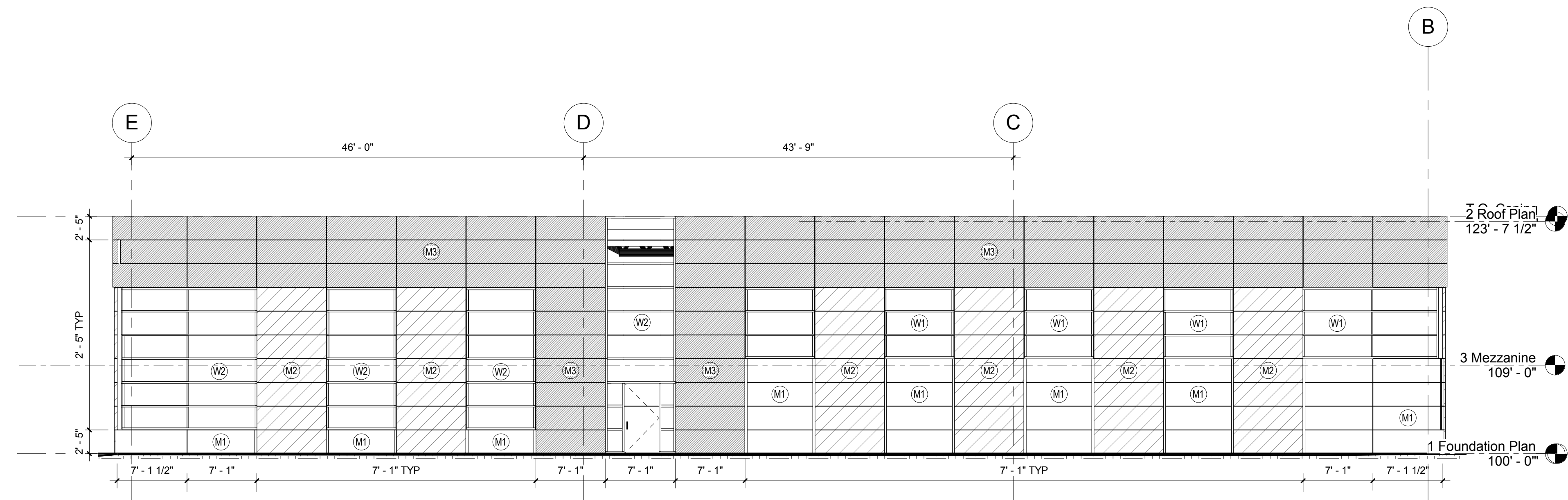
1 SOUTH ELEVATION - EAST
1/8" = 1'-0"

No.	Date	Description

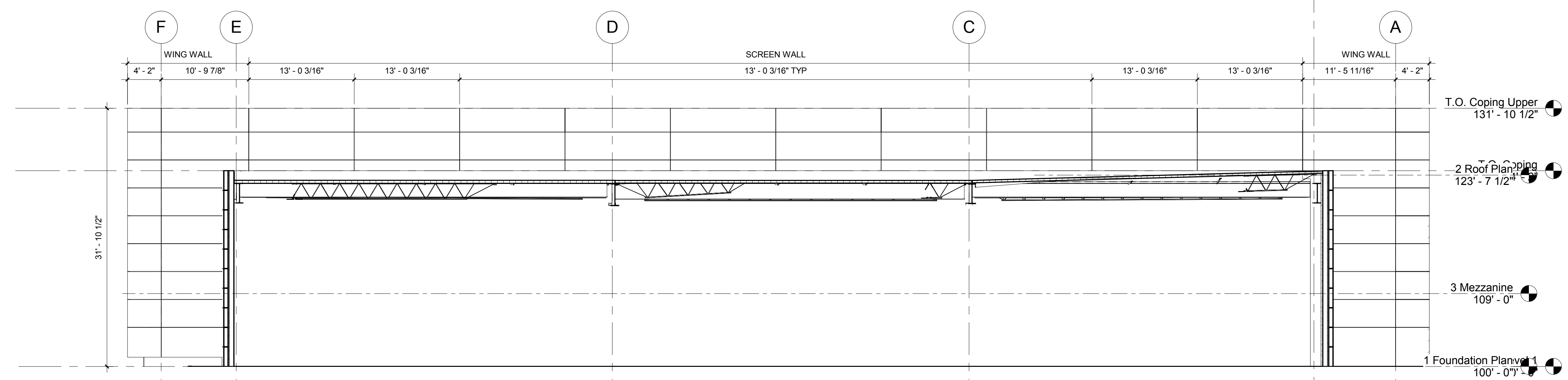
Key Value	BUILDING SYSTEM AND ASSEMBLIES
M1	COMPOSITE MTL. PANEL RANGREEN SYSTEM COLOR #01 2.5" PROJECTION FROM WALL PLANE. BACKUP FRAMING SYSTEM ATTACHED TO 5/8" DENSEGLASS COVERED WITH SPRAY ON WATERPROOFING. SUPPORTING METAL STUD WALL SYSTEM TO BE SUPPORTED BY FOUNDATION WALL AT BASE OR STEEL SUPPORT PLATES AT INTERMEDIATE POINTS.
M2	COMPOSITE MTL. PANEL RANGREEN SYSTEM COLOR #01 4.5" PROJECTION FROM WALL PLANE. BACKUP FRAMING SYSTEM ATTACHED TO 5/8" DENSEGLASS COVERED WITH SPRAY ON WATERPROOFING. SUPPORTING METAL STUD WALL SYSTEM TO BE SUPPORTED BY FOUNDATION WALL AT BASE OR STEEL SUPPORT PLATES AT INTERMEDIATE POINTS.
M3	COMPOSITE MTL. PANEL RANGREEN SYSTEM COLOR #03 6.5" PROJECTION FROM WALL PLANE. BACKUP FRAMING SYSTEM ATTACHED TO 5/8" DENSEGLASS COVERED WITH SPRAY ON WATERPROOFING. SUPPORTING METAL STUD WALL SYSTEM TO BE SUPPORTED BY FOUNDATION WALL AT BASE OR STEEL SUPPORT PLATES AT INTERMEDIATE POINTS.
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W2	ALUMINUM CURTAIN WALL W/ LOW-E TINTED GLASS (BASIS OF DESIGN: KAWNEER 1600 WALL SYSTEM 2. HORIZONTAL MULLIONS TO HAVE STANDARD 1 1/4" OR 2 1/2" MULLION CAPS. VERTICAL MULLIONS TWO-SIDED STRUCTURAL GLAZED.)



3 WEST ELEVATION
1/8" = 1'-0"

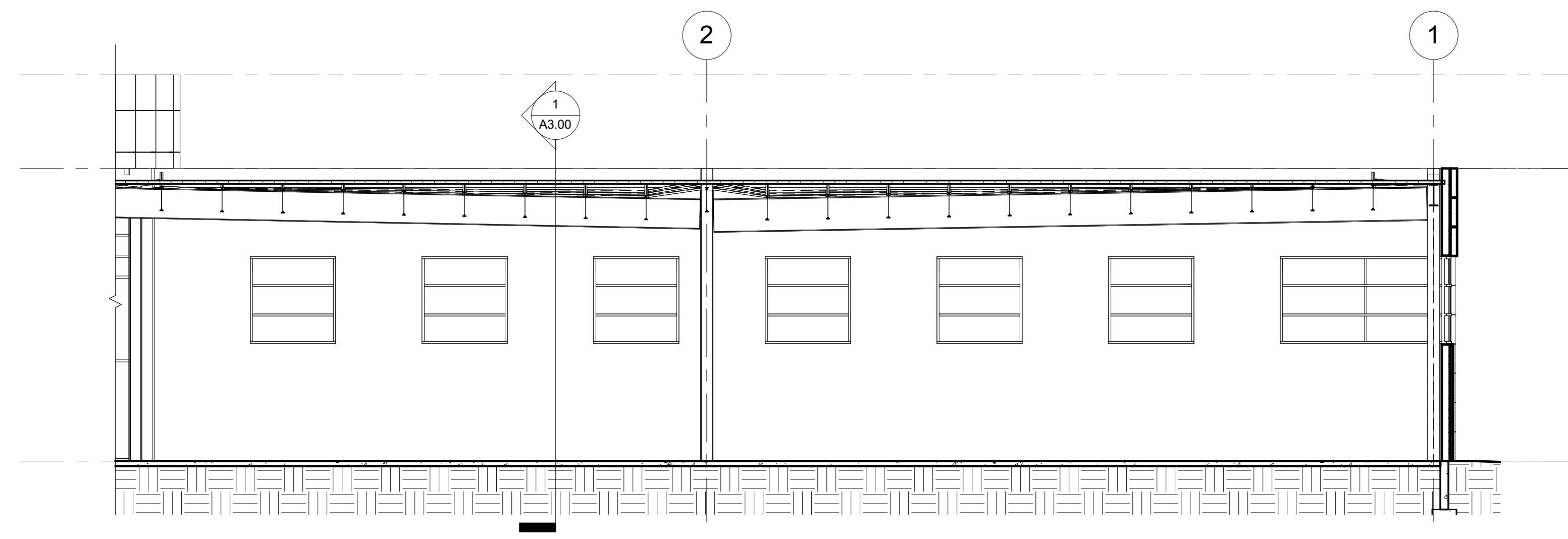


2 EAST ELEVATION
1/8" = 1'-0"

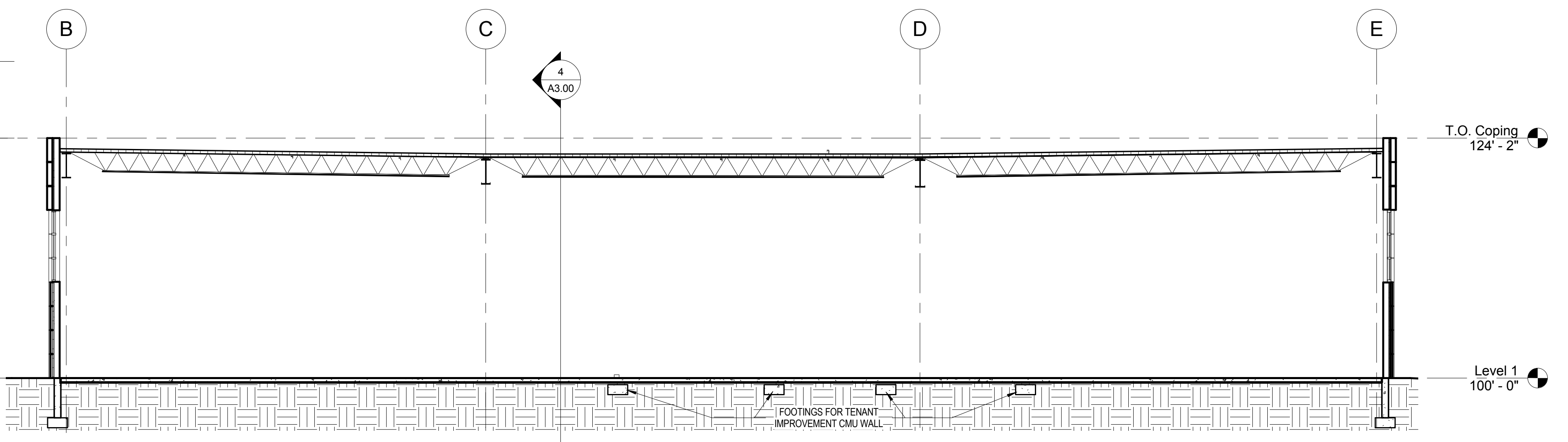


1 ELEVATION EAST CENTRAL
1/8" = 1'-0"

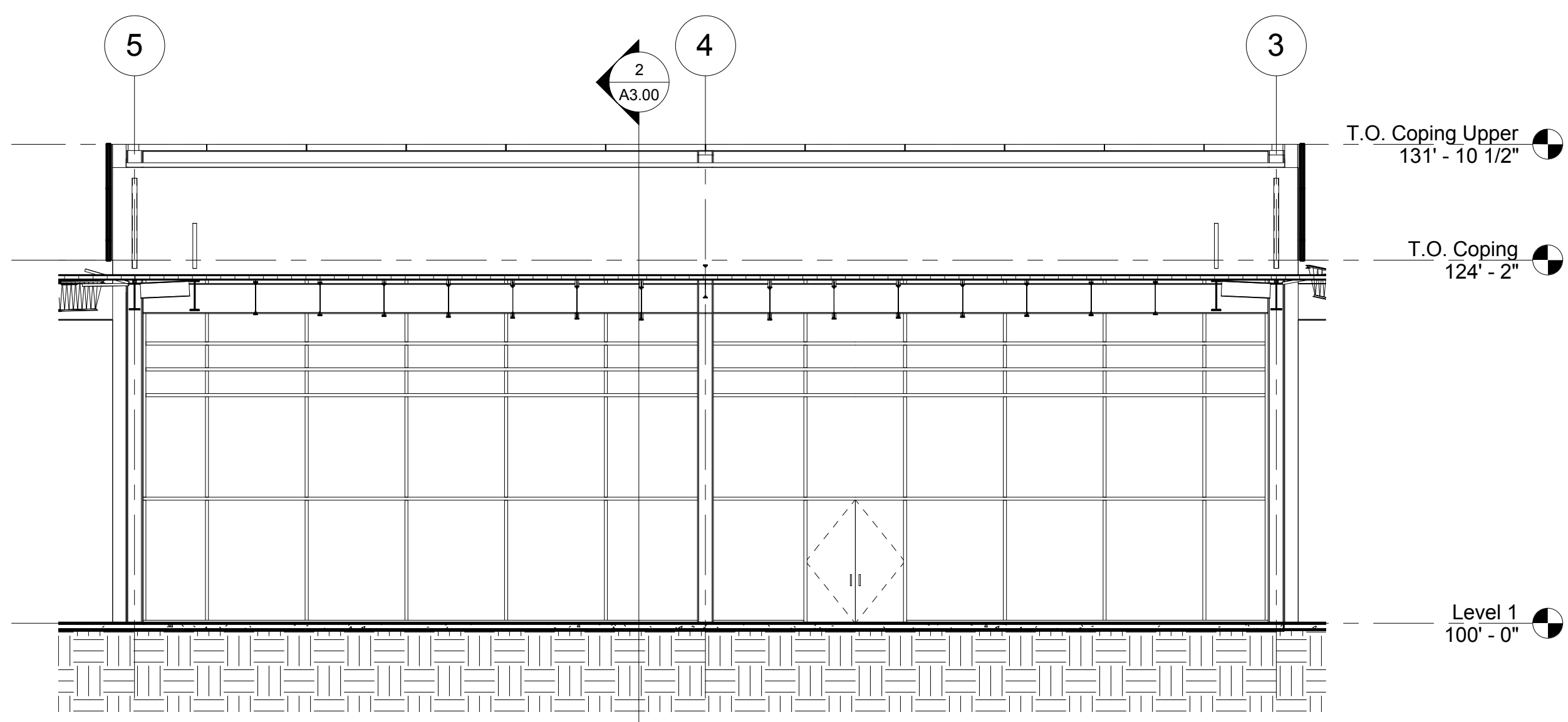
No.	Date	Description



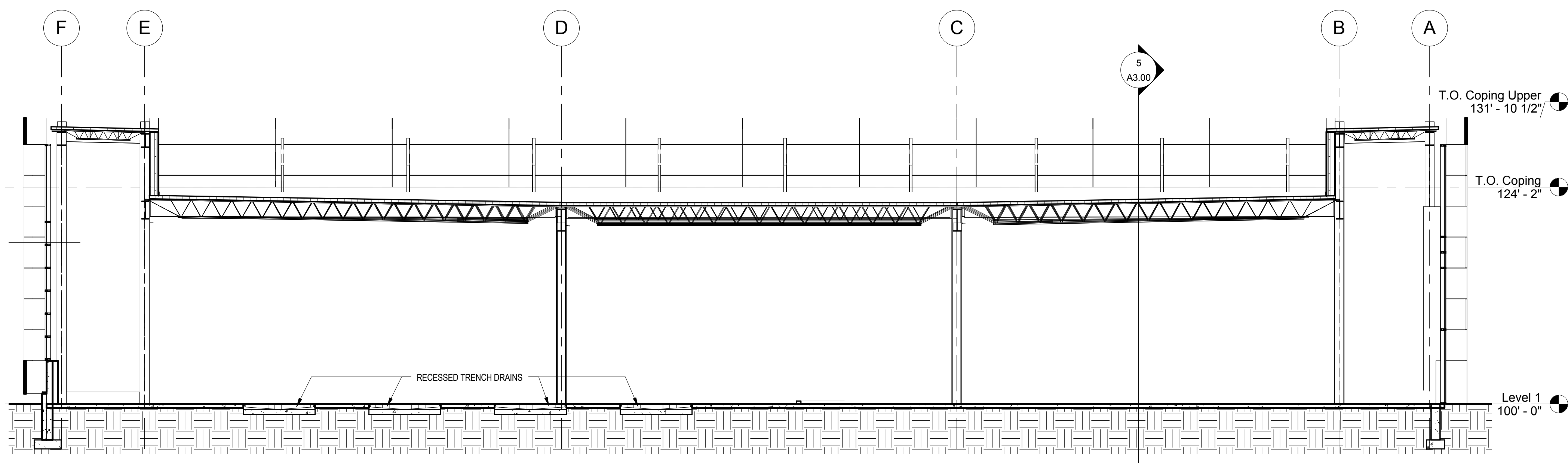
6 EAST-WEST BUILDING SECTION - GRIDS 3-1
1/8" = 1'-0"



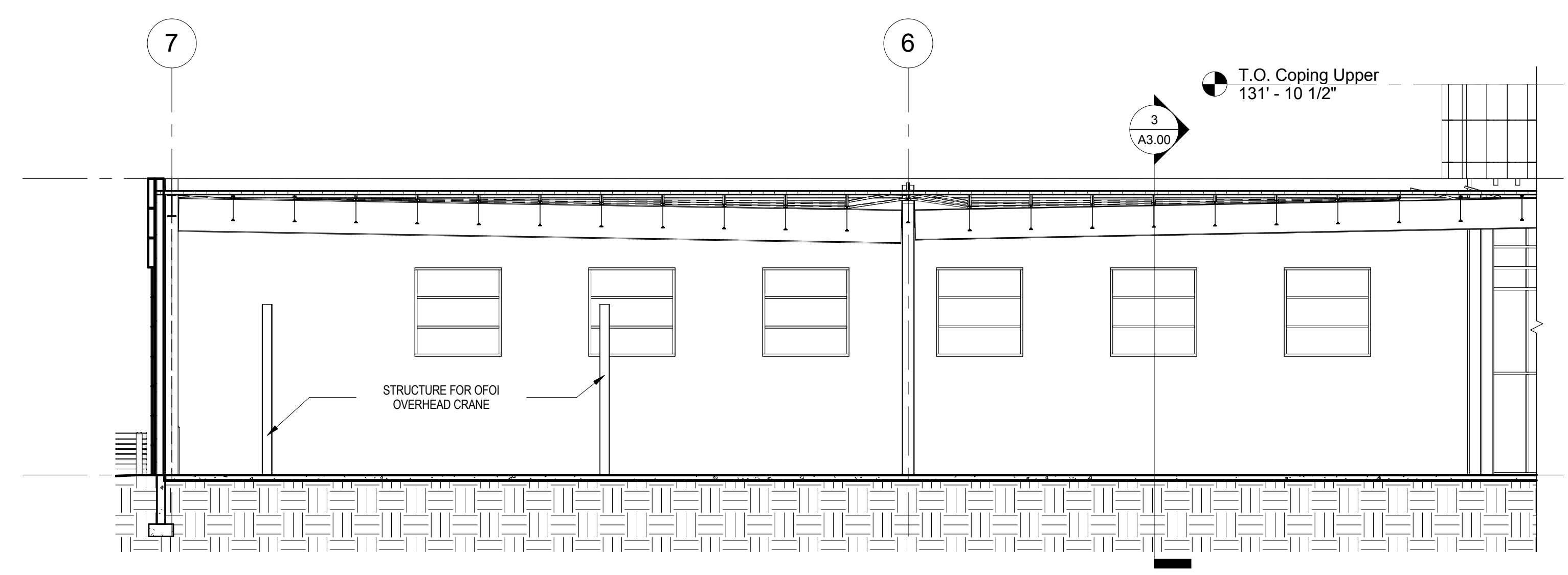
3 NORTH-SOUTH BUILDING SECTION - GRID 6
1/8" = 1'-0"



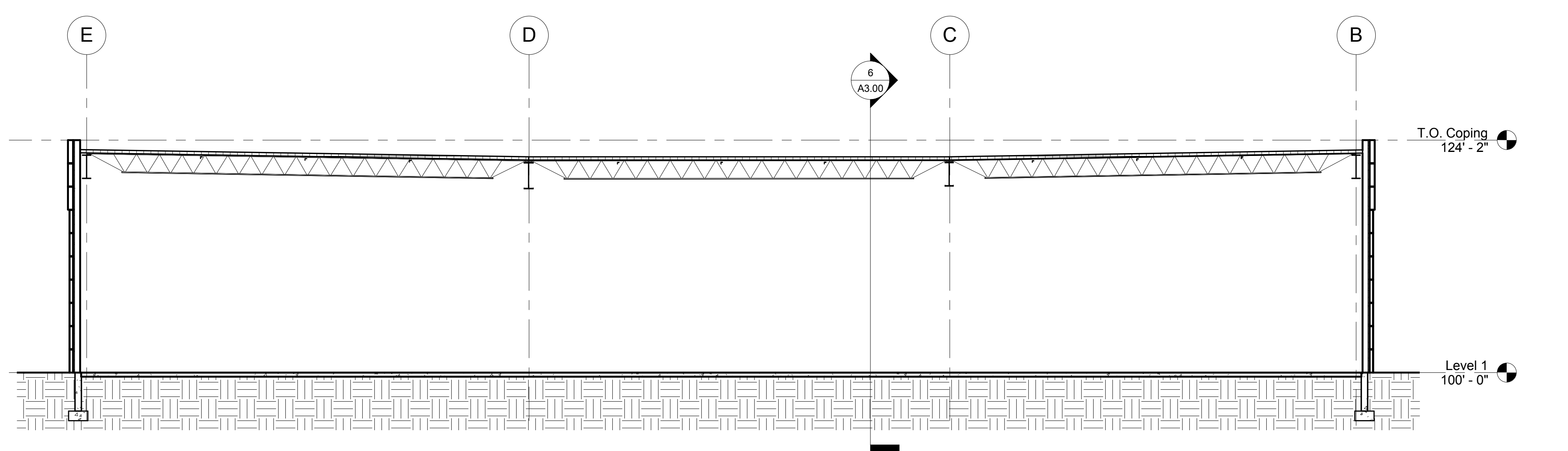
5 EAST-WEST BUILDING SECTION - GRIDS 5-3
1/8" = 1'-0"



2 NORTH-SOUTH BUILDING SECTION - GRID 4
1/8" = 1'-0"



4 EAST-WEST BUILDING SECTION - GRIDS 7-5
1/8" = 1'-0"



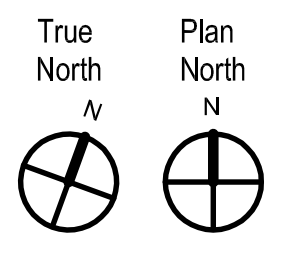
1 NORTH-SOUTH BUILDING SECTION - GRID 2
1/8" = 1'-0"

DEVELOPER:
IRGENS
 833 East Michigan Street Suite 400,
 Milwaukee, Wisconsin 53202
 414.443.0700

Consultant:
HARWOOD ENGINEERING CONSULTANTS
 255 North 21st Street Milwaukee, Wisconsin 53233
 414.475.5554 414.473.6299 fax harwood@hec.com
 HEC Project Number: 100042.00

Consultant:
SIGMA GROUP
 Single Source. Smart Solutions.
 www.thesignmagroup.com
 1300 West Canal Street
 Milwaukee, WI 53233
 Phone: 414-643-4200
 Fax: 414-643-4210

Project:
Waters II
 Location:
 11011 West Park Place
 Milwaukee, WI 53224



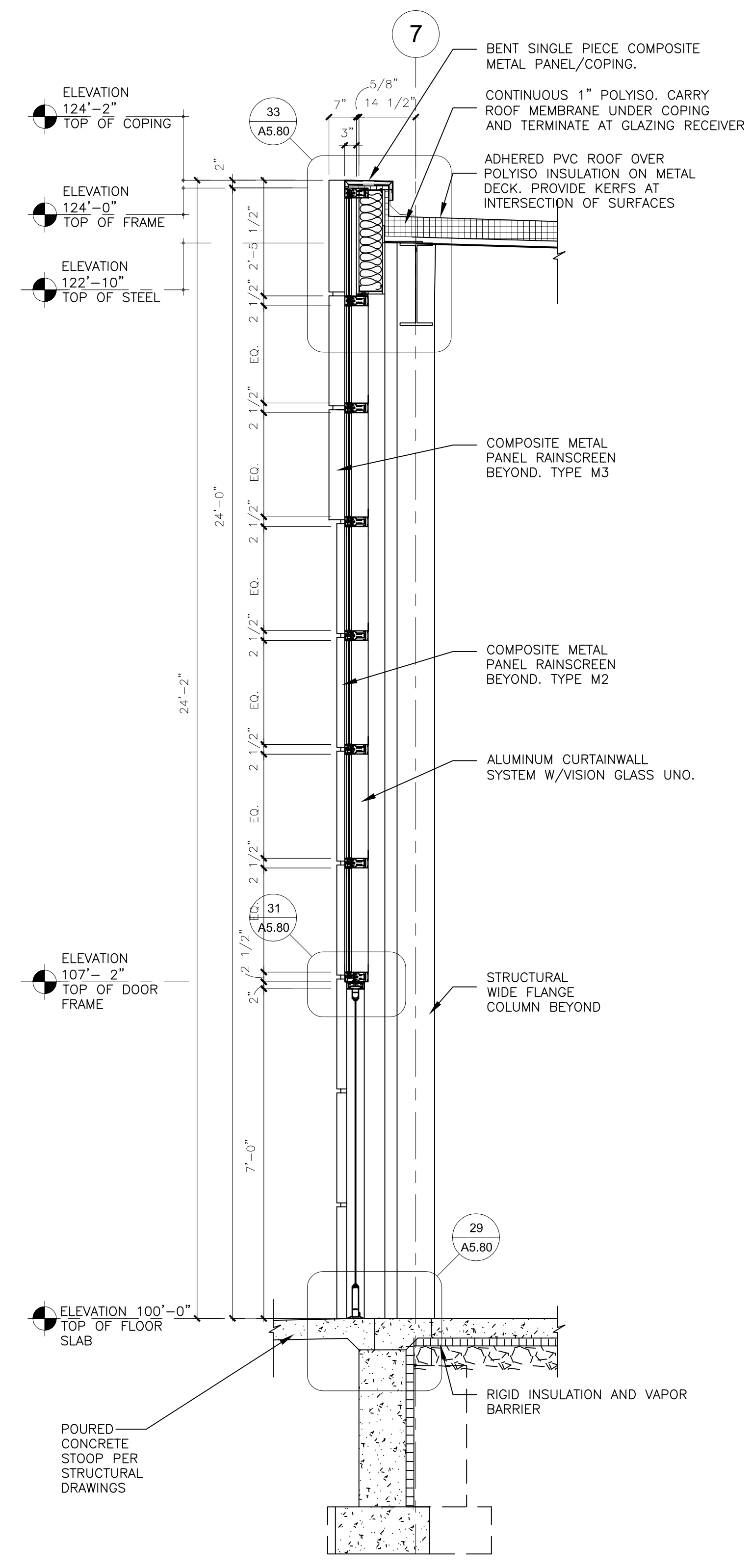
Design Development
 Progress Set
 Sheet:
WALL SECTIONS

Scale:

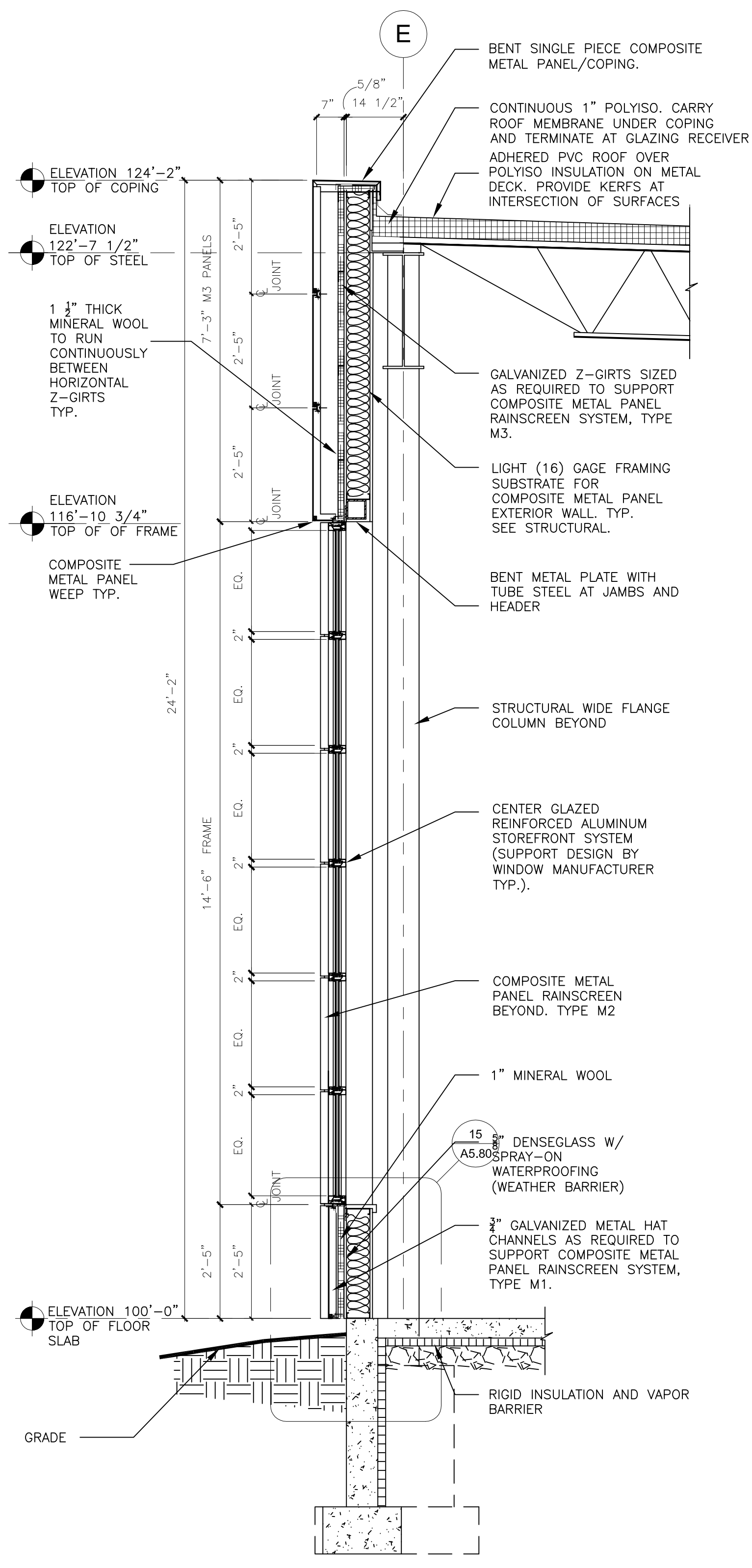
Revisions:

No.	Date	Description

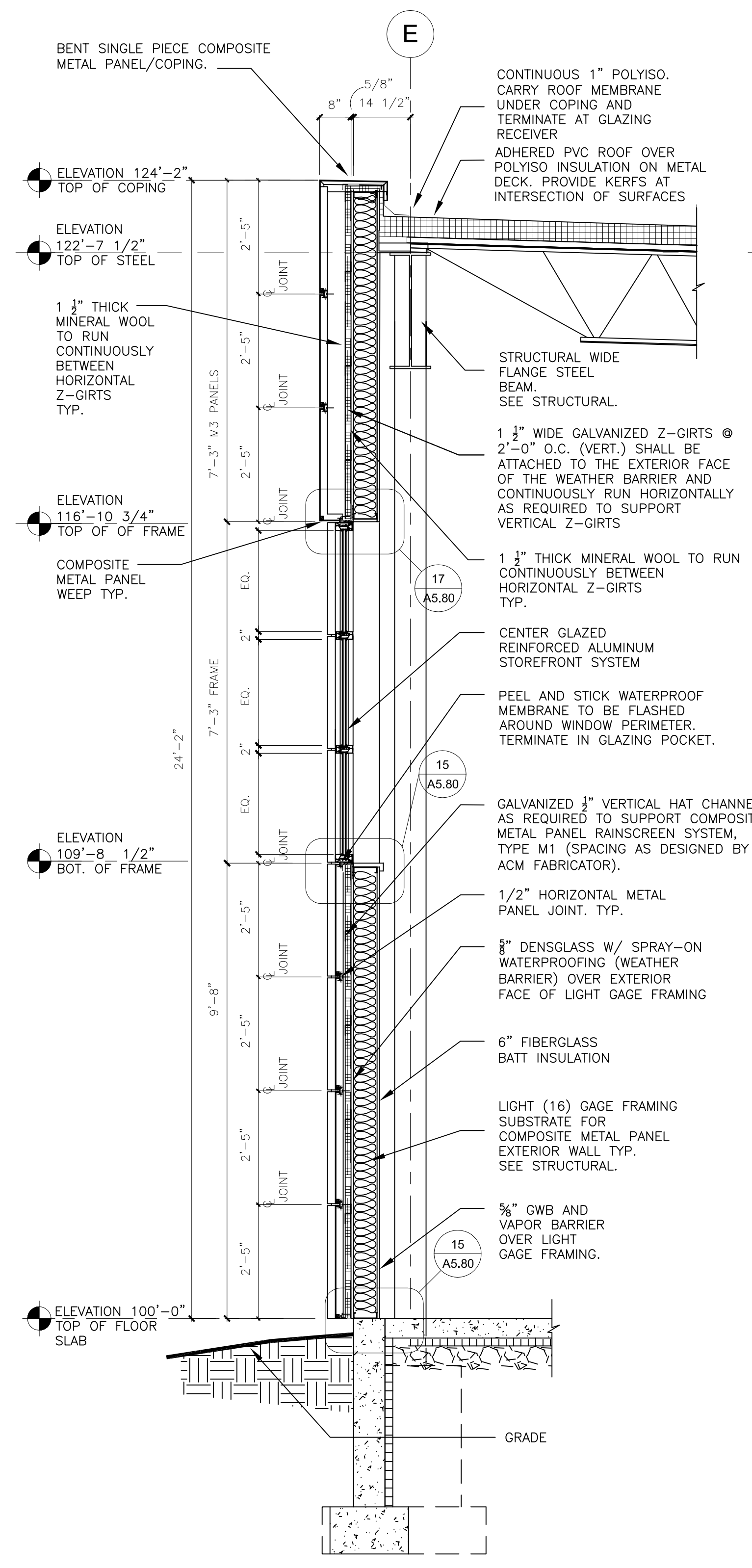
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 Project No:
 170025.00
 Sheet No:



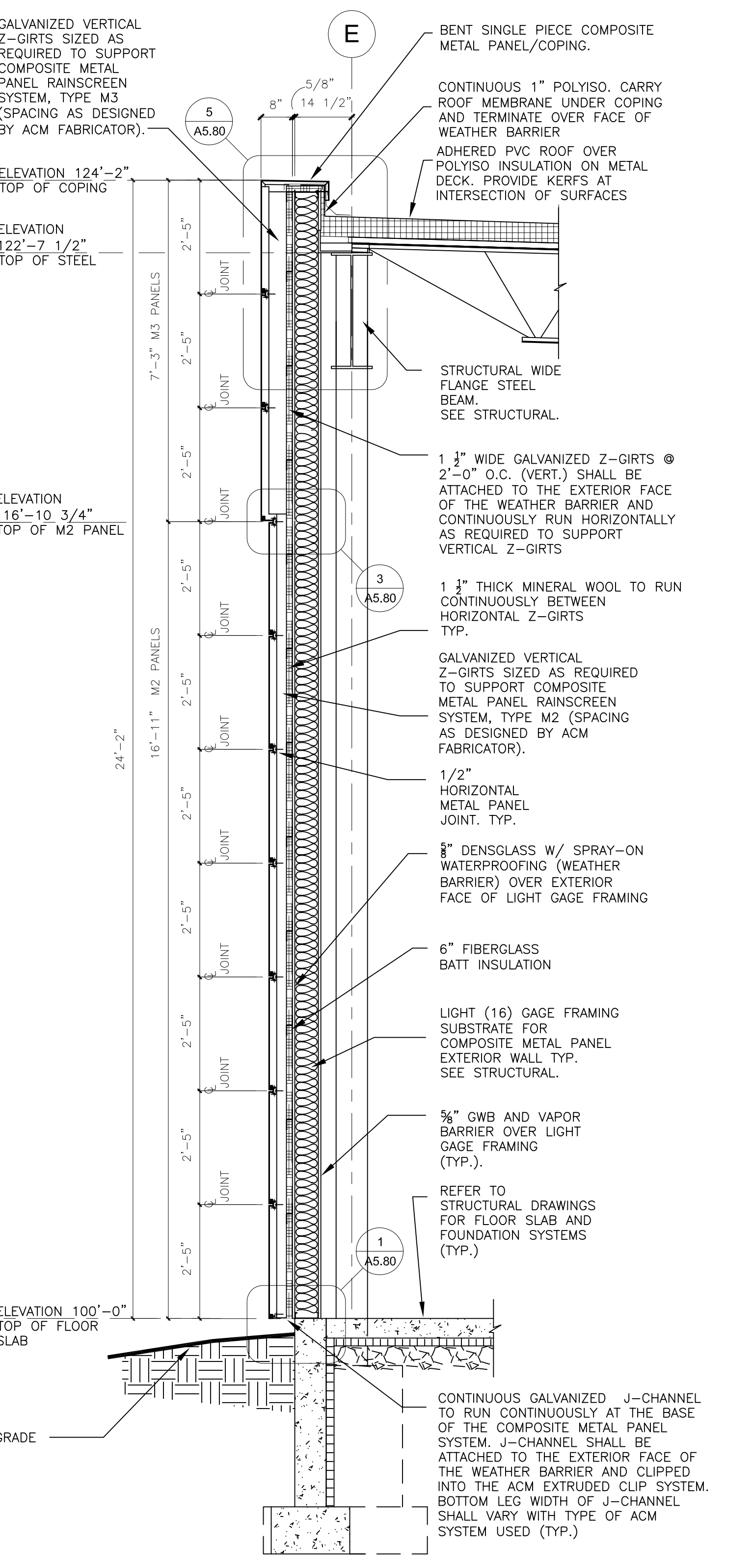
22 STOREFRONT @ EXIT DOOR
 1/2" = 1'-0"



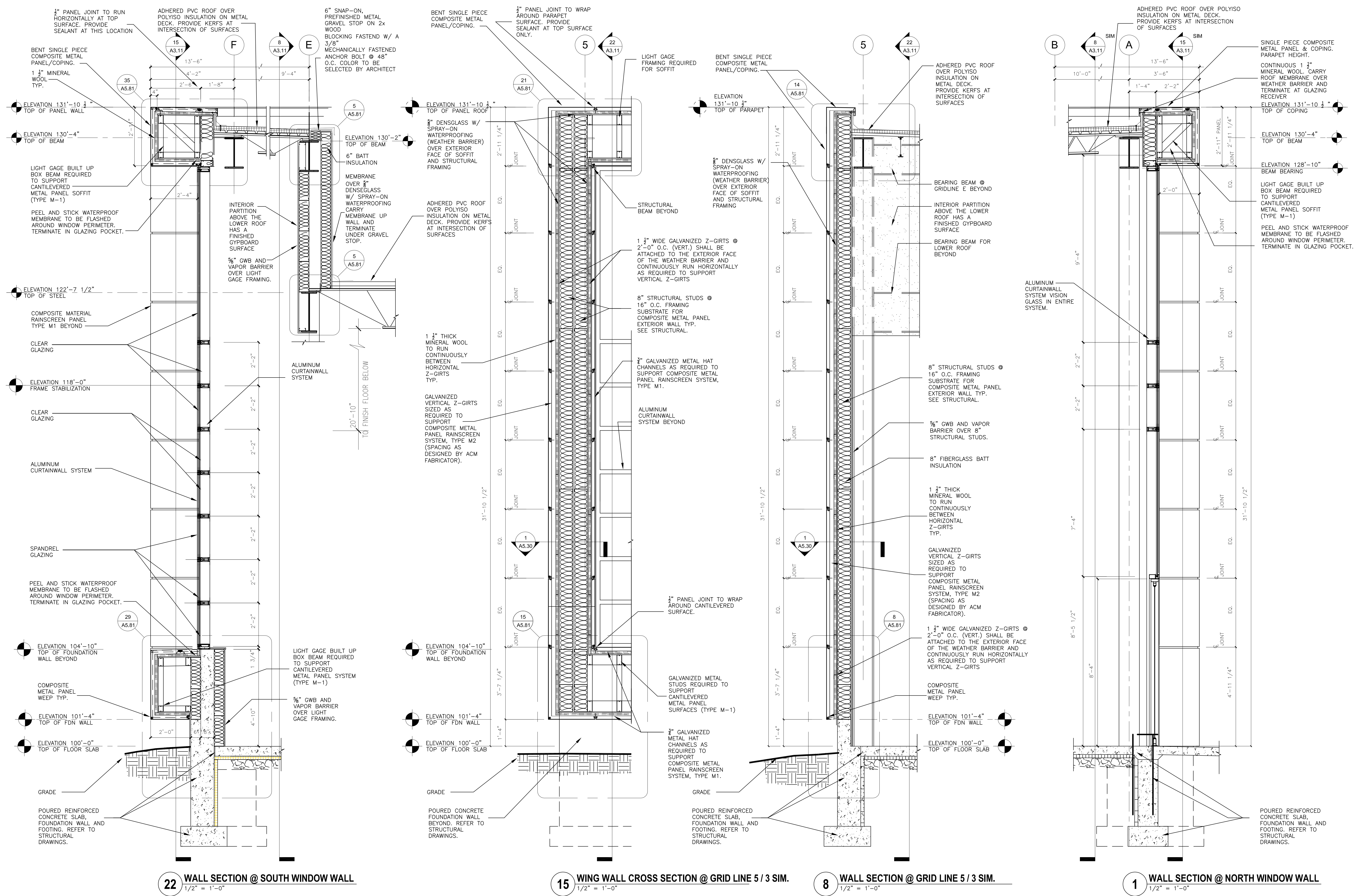
15 STOREFRONT @ FULL WINDOW
 1/2" = 1'-0"



8 STOREFRONT @ HIGH WINDOWS. TYP.
 1/2" = 1'-0"



1 PANEL WALL. TYP.
 1/2" = 1'-0"



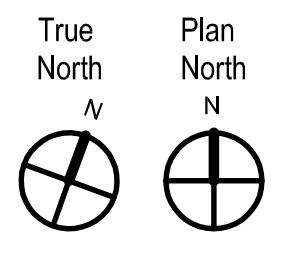
DEVELOPER:
IRGENS
 833 East Michigan Street Suite 400,
 Milwaukee, Wisconsin 53202
 414.443.0700

Consultant:
HARWOOD ENGINEERING CONSULTANTS
 255 North 21st Street Milwaukee, Wisconsin 53233
 414.475.5554 414.473.9299 fax harwood@hed.com
 HEC Project Number: 160042.00

Consultant:
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 Phone: 414-643-4200
 Fax: 414-643-4210

Project:
Waters II

Location:
 11011 West Park Place
 Milwaukee, WI 53224



Design Development
 Progress Set

Sheet:
WALL SECTIONS

Scale:

Revisions:

No.	Date	Description

Date:
 06/30/2017

Project No:
 170025.00

Sheet No:

A3.11

DEVELOPER:

 833 East Michigan Street Suite 400,
 Milwaukee, Wisconsin 53202
 414.443.0700

Consultant:

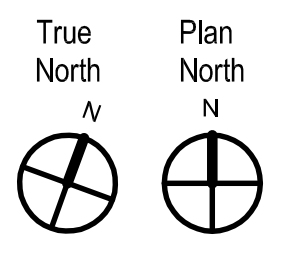
 255 North 21st Street Milwaukee, Wisconsin 53233
 414.476.3554 414.473.9299 fax harwood@hcei.com
 HEC Project Number: 160042.00

Consultant:

 Single Source. Smart Solutions.
 www.thesigmagroup.com
 1300 West Canal Street
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 Phone: 414-643-4200
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Project:
Waters II

Location:
 11011 West Park Place
 Milwaukee, WI 53224



Design Development
 Progress Set

Sheet:
WALL SECTIONS

Scale:

Revisions:

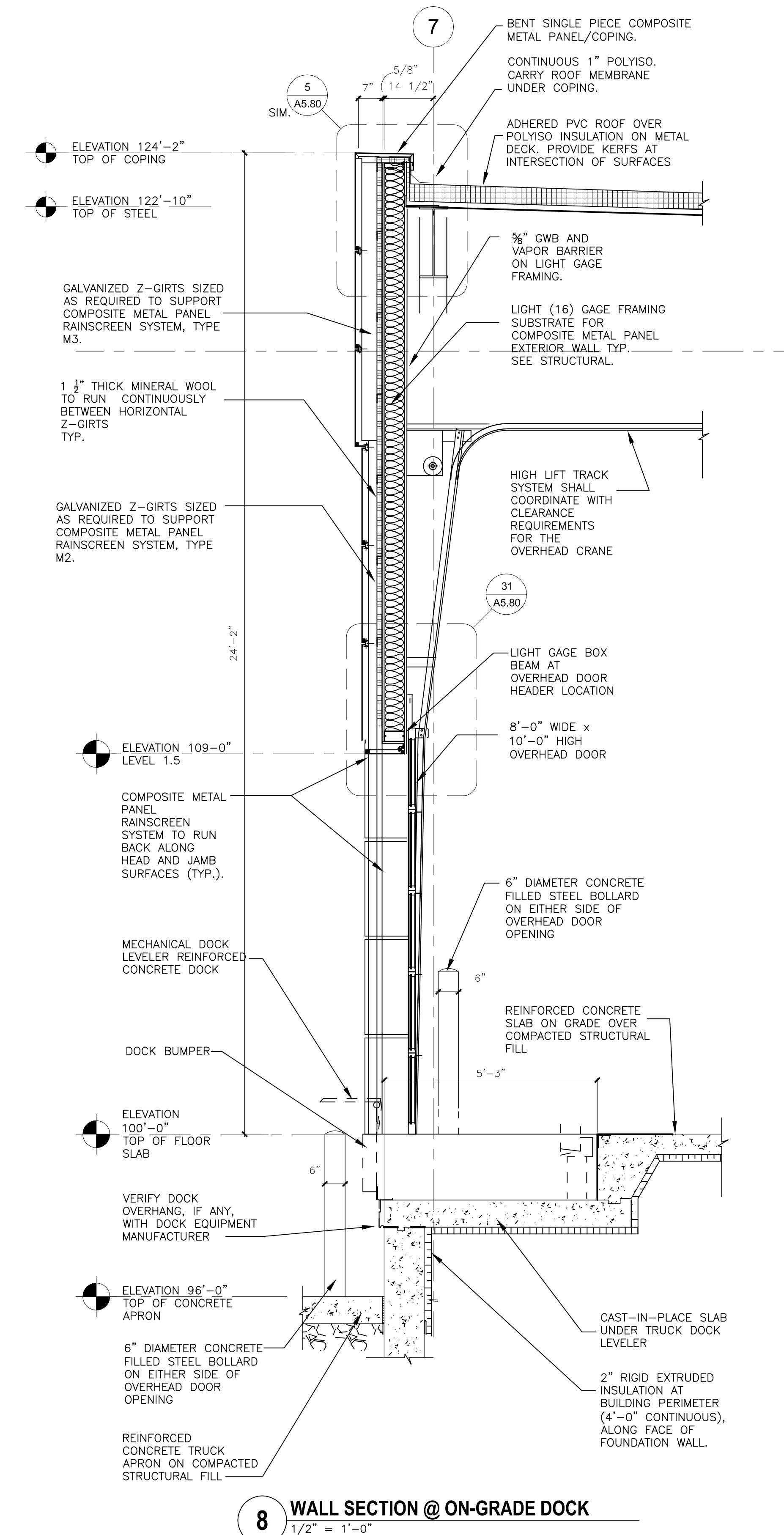
No.	Date	Description

Date:
 06/30/2017

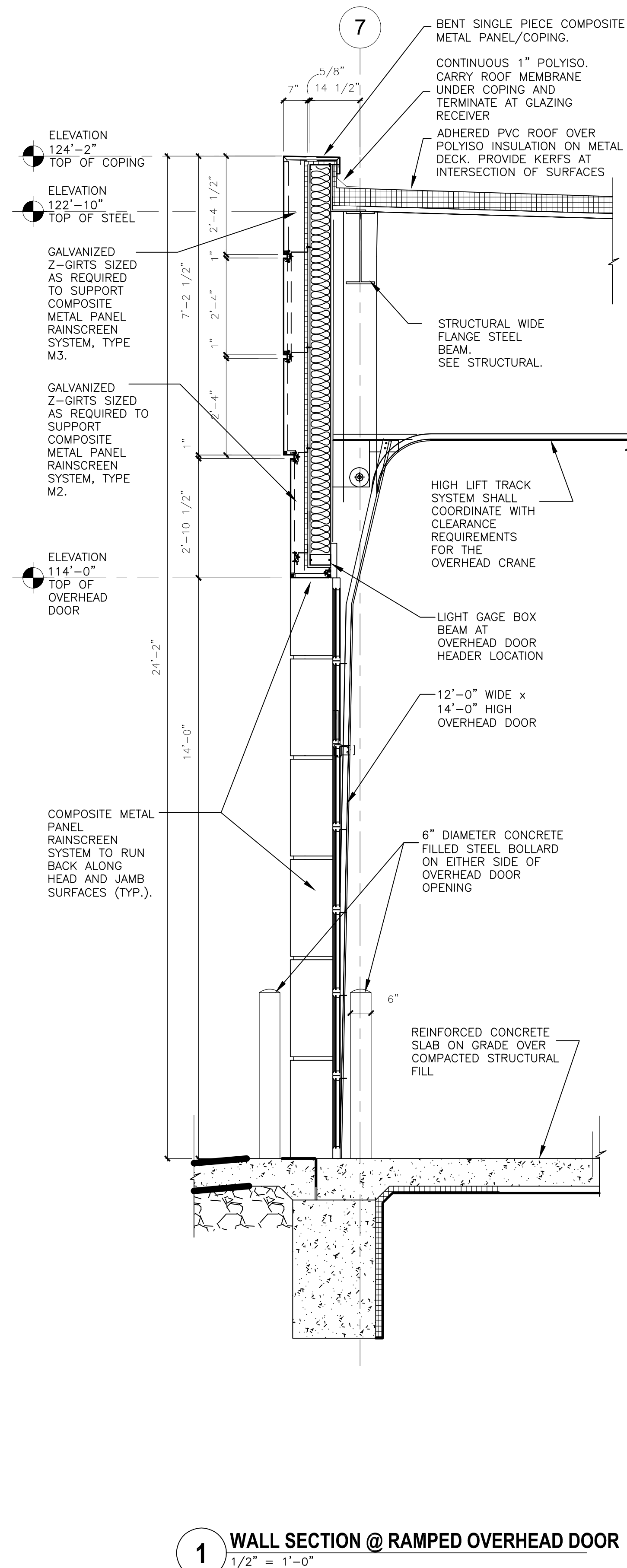
Project No:
 170025.00

Sheet No:

A3.12



8 WALL SECTION @ ON-GRADE DOCK
 1/2" = 1'-0"



1 WALL SECTION @ RAMPED OVERHEAD DOOR
 1/2" = 1'-0"