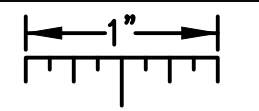


THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



Beckett & Raeder  
Lansing, Michigan  
313.487.1100  
www.beckett-raeder.com

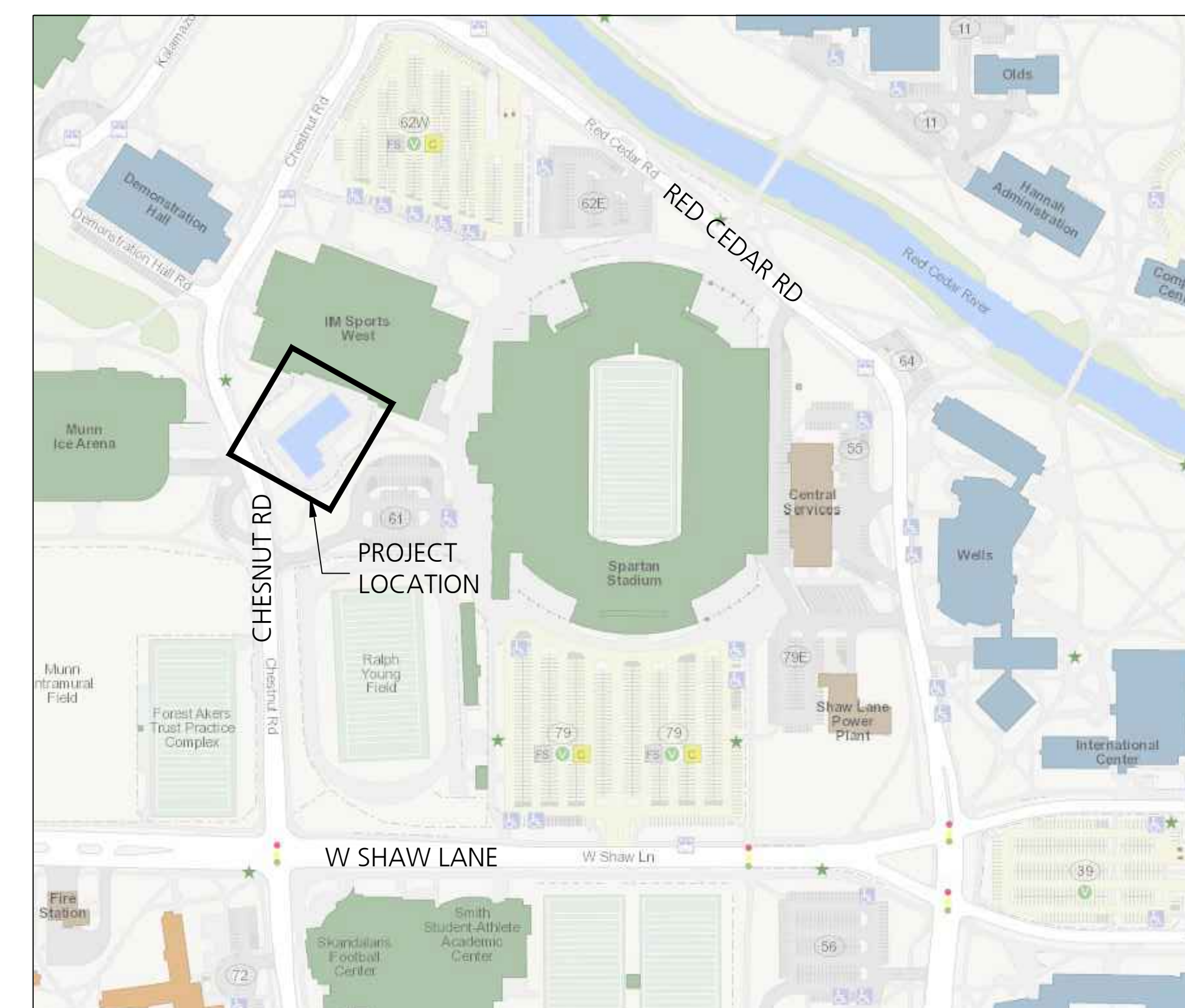
Infrastructure Planning and Facilities  
**MICHIGAN STATE UNIVERSITY**

# Lot 61-Spartan Stadium-West Side Build Parking Lot

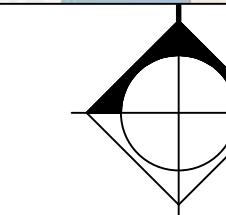
Michigan State University  
393 Chestnut Rd, East Lansing, MI 48824

## SHEET INDEX

C000	Cover Sheet
EC100	Existing Conditions Plan
EC101	Existing Conditions Survey
EC102	Existing Conditions Survey
C200	Demolition Plan
C201	SESC Plan
C202	SESC Details
C300	Layout and Materials Plan
C400	Grading Plan
C500	Utilities Plan
C510	Storm Profiles
C511	Storm Profiles
C600	Site Details
C601	Site Details
C700	Utility Details
C800	Stormwater Management Plan - Existing
C801	Stormwater Management Plan - Proposed
L100	Site Restoration Plan
E100	Electrical Site Plan (For Reference Only)
E101	Electrical Details (For Reference Only)



PROJECT LOCATION MAP  
NOT TO SCALE



LOT 61-SPARTAN STADIUM-WEST SIDE  
BUILD PARKING LOT

CAPITAL PROJ. NO.  
CP23106

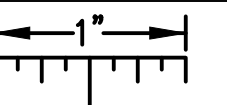
PRJ. MGR.	A. LINEBAUGH
ARCH.	
MECH.	
ELEC.	G. HALSEY
CIVIL	S. LAUGHLIN
L.A.	D. WILBER
INT. DES.	
CONST. REP.	A. LINEBAUGH
APPR.	
DATE	03-13-2024
SCALE	1" = 20'
REVISIONS	
50% CD REVIEW	
95% CD REVIEW	
BIDS	

COVER SHEET

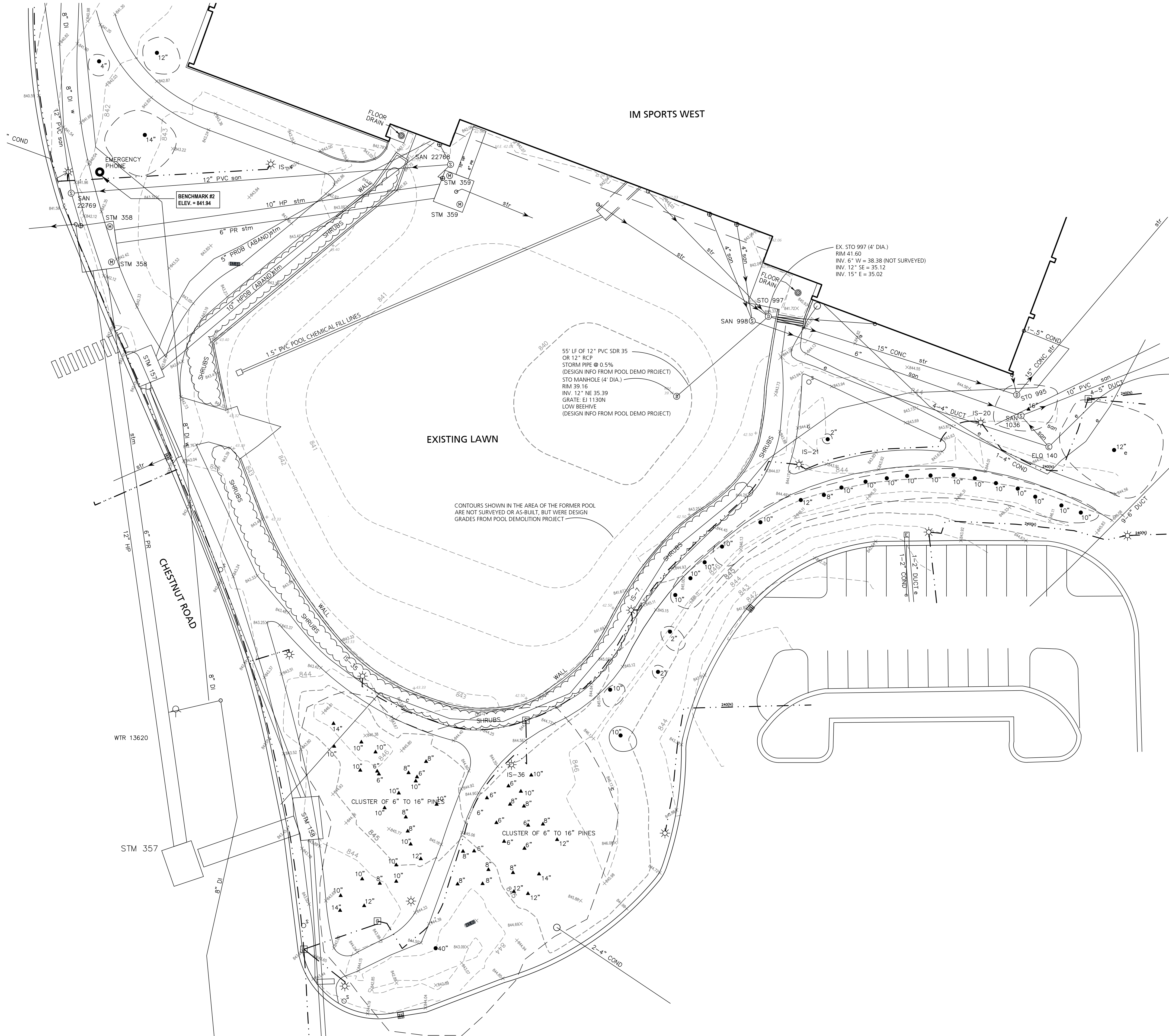
**C000**

c:\Users\collin.jackson\beckett & raeder, inc\lri la - documents\msu west tm pool demo parking lot 2023\Drawings\current drawings\C000 Cover Sheet.dwg, C000, 3/13/2024 2:49:53 PM, Collin Jackson, None

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



**Beckett & Raeder**  
 Landmark Architecture  
 Planning, Engineering &  
 Construction  
 100 West Ottawa Ave. SW  
 Grand Rapids, MI 49503  
 (616) 575-6644



**EXISTING CONDITIONS LEGEND**

---	84.4	EXISTING MINOR CONTOUR	⊙	TELEPHONE MANHOLE
---	84.4	EXISTING MAJOR CONTOUR	⊙ <sub>W</sub>	WATER VALVE
•		SPOT ELEVATION	e	ELECTRIC
⊙		CATCH BASIN - ROUND	stm	STEAM
⊙		CATCH BASIN - SQUARE	san	SANITARY
⊙		ELECTRIC MANHOLE	str	STORM
⊙		ELECTRIC RISER	c	COMMUNICATIONS
⊙		HAND HOLE	C - ABAND	ABANDONED COMMUNICATIONS
⊙		HYDRANT	w	WATERMAIN
⊙		LIGHT POLE	---	UNDERGROUND LIGHTING CONDUIT
⊙		MANHOLE	---	UTILITY TUNNEL
⊙		BENCHMARK / EMERGENCY PHONE	x	FENCE
⊙		POST	---	SHRUB LINE - DECIDUOUS
⊙		PHONE RISER	•	DECIDUOUS TREE
⊙		SIGN	▲	EVERGREEN TREE
⊙		SANITARY SEWER MANHOLE	•	DECIDUOUS TREE CANOPY
⊙		STORMWATER MANHOLE	•	

**SURVEYOR INFORMATION**

1. SOURCE INFORMATION FROM PLANS AND MARKINGS HAS BEEN COMBINED WITH OBSERVED EVIDENCE OF UTILITIES TO DEVELOP A VIEW OF THE UNDERGROUND UTILITIES. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED. IN ADDITION, IN SOME JURISDICTIONS, 811 OR OTHER SIMILAR UTILITY LOCATE REQUESTS FROM SURVEYORS MAY BE IGNORED OR RESULT IN AN INCOMPLETE RESPONSE. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CLIENT IS ADVISED THAT EXCAVATION AND/OR A PRIVATE UTILITY LOCATE REQUEST MAY BE NECESSARY. THESE LOCATIONS SHOULD NOT BE INTERPRETED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.
2. NOTE TO CONTRACTORS: 3 (THREE) WORKING DAYS BEFORE YOU DIG, CALL MISS DIG AT TOLL FREE 1-800-482-7171 FOR UTILITY LOCATIONS ON THE GROUND.
3. FOR THIS PROJECT WE REFERENCED BM\_204, BM\_219 AND BM\_205.

**SURVEY PREPARED BY**

NIEDERVELD  
 217 GRANDVILLE AVE. SW  
 SUITE 302  
 GRAND RAPIDS, MI 49503  
 PHONE: (616) 575 - 5190  
 FAX: (616) 575 - 6644

**EXISTING CONDITIONS NOTES**

1. CONTRACTOR SHALL CALL MISS DIG (811) A MINIMUM OF THREE WORKING DAYS PRIOR TO START OF CONSTRUCTION.
2. CONTRACTOR SHALL INVESTIGATE EXTENT AND LOCATION OF ALL EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR PROTECTION AND RESTORATION OF SAME IF DAMAGED AS A RESULT OF CONTRACTOR'S OPERATIONS.
3. CONTOUR INTERVAL SHOWN IS 1-FOOT.
4. CONDITIONS SHOWN ARE AN APPROXIMATION OF CURRENT SITE CONDITIONS FOLLOWING THE DEMOLITION OF THE POOL IN THIS LOCATION. SEE SHEET C101 FOR SURVEY PRIOR TO THE DEMOLITION PROJECT.

**SOIL TYPES**

THE NATURAL RESOURCE CONSERVATION SERVICE SOIL SURVEY INDICATES THE SITE IS COMPOSED OF UGA: URBAN LAND - CAPAC - COLWOOD COMPLEX, 0 TO 4 PERCENT SLOPES AND URBAN LAND - ROYER - SPINKS COMPLEX, 0 TO 10 PERCENT SLOPES; IDENTIFIED WITHIN THE PROJECT AREA BASED ON USDA-NRCS AVAILABLE DATA.

**BENCHMARK INFORMATION**

1. BENCHMARK #1 ELEV. = 844.53 (MSU DATUM - NGVD29)  
 SET BENCHMARK, TOP NORTH-WESTERLY FLANGE BOLT UNDER "M" IN MADE TO HYDRANT, WEST SIDE OF CHESTNUT ROAD, ACROSS FROM THE I.M. OUTDOOR POOL.
2. BENCHMARK #2 ELEV. = 841.94 (MSU DATUM - NGVD29)  
 SET BENCHMARK, EASTERLY MOST POINT ON THE CONCRETE BASE TO THE EMERGENCY PHONE EAST SIDE OF CHESTNUT ROAD NEAR THE NORTHWEST CORNER OF THE I.M. OUTDOOR POOL.

**MICHIGAN STATE UNIVERSITY**  
**Infrastructure Planning and Facilities**

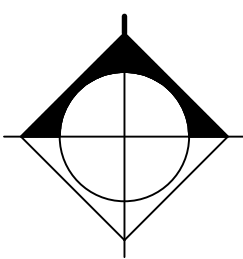
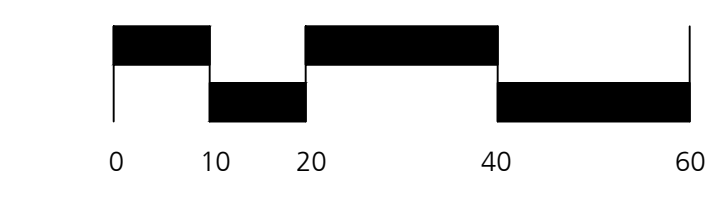
**LOT 61-SPARTAN STADIUM-WEST SIDE BUILD PARKING LOT**

CAPITAL PROJ. NO.  
 CP23106

PRJ. MGR. A. LINEBAUGH  
 ARCH. \_\_\_\_\_  
 MECH. \_\_\_\_\_  
 ELEC. G. HALSEY  
 CIVIL S. LAUGHLIN  
 L.A. D. WILBER  
 INT. DES. \_\_\_\_\_  
 CONST. REP. A. LINEBAUGH  
 APPR. \_\_\_\_\_  
 DATE 03-13-2024  
 SCALE 1" = 20'

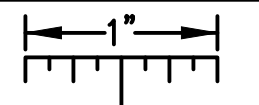
REVISIONS  
 50% CD REVIEW \_\_\_\_\_  
 95% CD REVIEW \_\_\_\_\_  
 BIDS \_\_\_\_\_

EXISTING CONDITIONS PLAN  
**EC100**



c:\Users\collinjackson\beckett & raeder, inc\lri la - documents\msu west im pool demo parking lot 2023\Drawings\current drawings\EC100.dwg, EC100, 3/13/2024 2:49:58 PM, Collin Jackson, AutoCAD PDF (General Documentation).pc3

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



Beckett & Raeder  
 Surveying & Engineering  
 1000 West Main Street, Suite 101  
 Ann Arbor, MI 48106  
 (734) 769-1100

Infrastructure Planning and Facilities  
**MICHIGAN STATE UNIVERSITY**

LOT 61-SPARTAN STADIUM-WEST SIDE BUILD PARKING LOT

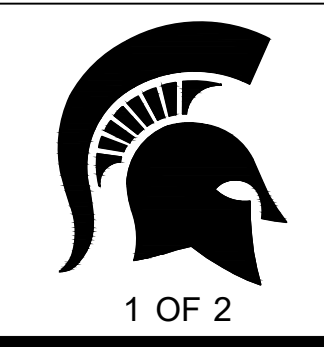
CAPITAL PROJ. NO. CP18222  
 LEAD \_\_\_\_\_  
 ARCH. \_\_\_\_\_  
 MECH. \_\_\_\_\_  
 ELEC. \_\_\_\_\_  
 CIVIL \_\_\_\_\_  
 L.A. \_\_\_\_\_  
 INT. DES. \_\_\_\_\_  
 REP. \_\_\_\_\_  
 APPR. \_\_\_\_\_  
 DATE 1.28.2019  
 SCALE 1" = 20'  
 REVISIONS \_\_\_\_\_

EXISTING CONDITIONS SURVEY  
**EC101**

Infrastructure Planning and Facilities  
**MICHIGAN STATE UNIVERSITY**

IM SPORTS WEST REFURBISH OUTDOOR POOL

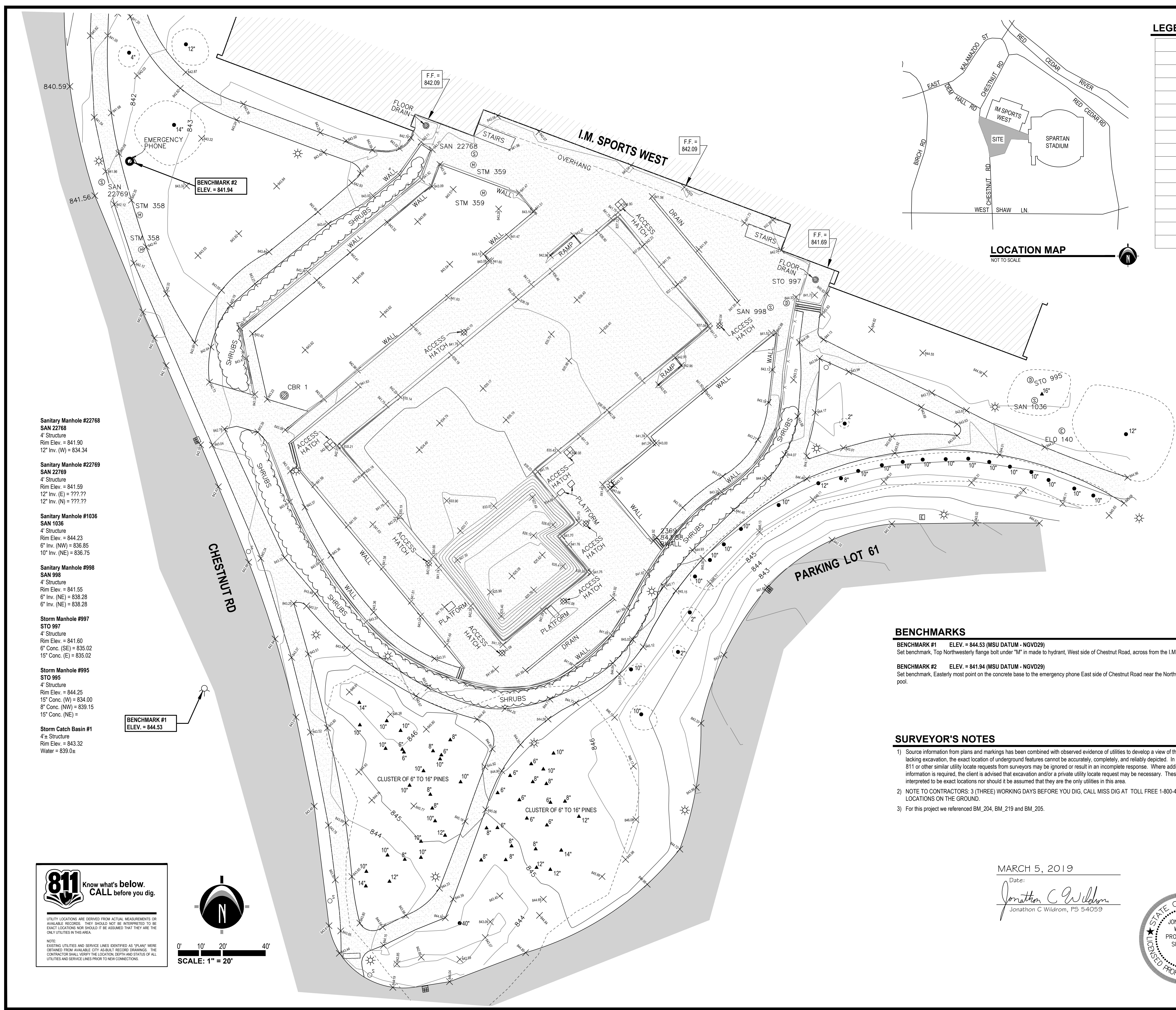
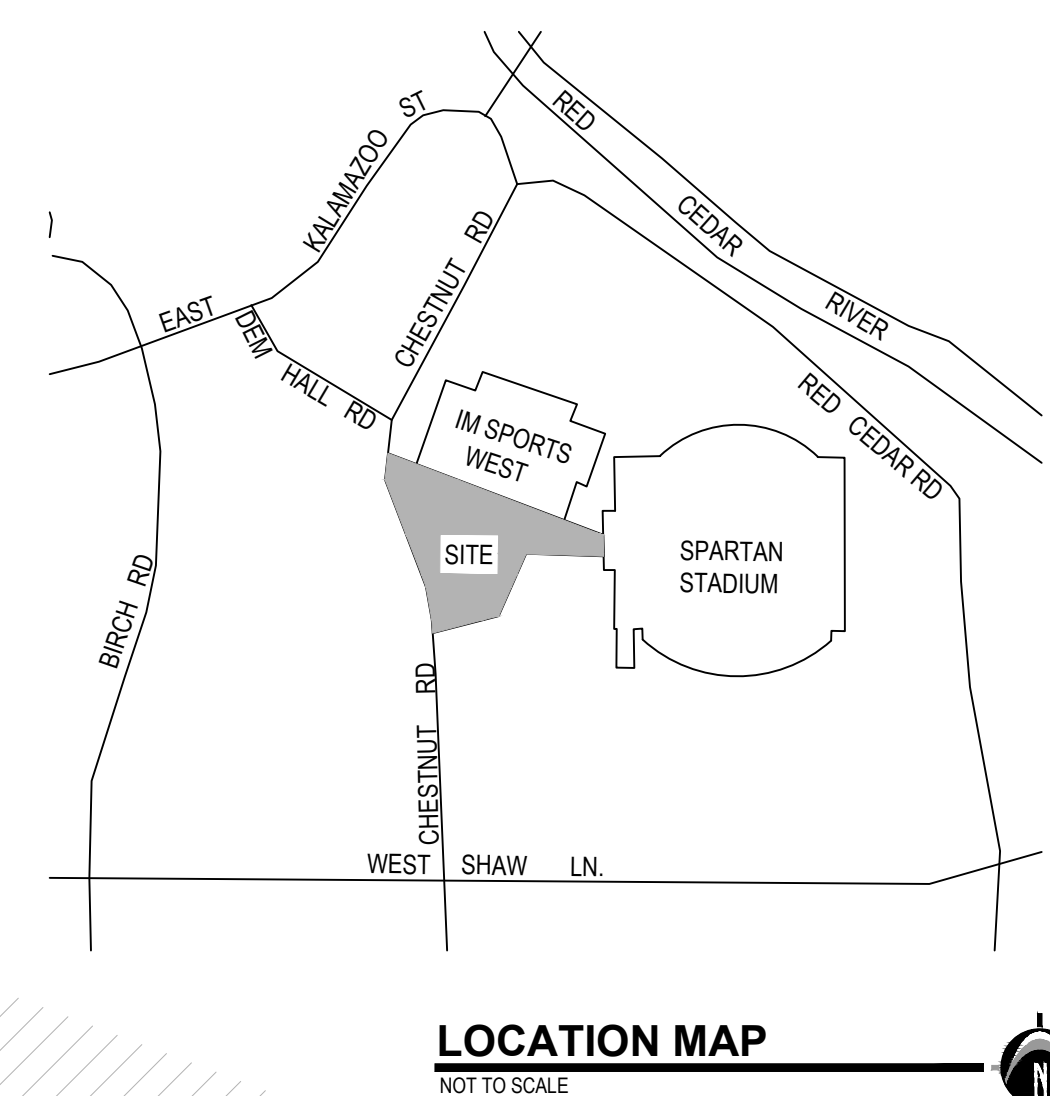
CAPITAL PROJ. NO. CP18222  
 LEAD \_\_\_\_\_  
 ARCH. \_\_\_\_\_  
 MECH. \_\_\_\_\_  
 ELEC. \_\_\_\_\_  
 CIVIL \_\_\_\_\_  
 L.A. \_\_\_\_\_  
 INT. DES. \_\_\_\_\_  
 REP. \_\_\_\_\_  
 APPR. \_\_\_\_\_  
 DATE 1.28.2019  
 SCALE 1" = 20'  
 REVISIONS \_\_\_\_\_



1 OF 2

**LEGEND**

	Benchmark		Telephone Manhole
	Catch Basin - Round		Water Valve
	Catch Basin - Square		Cable TV
	Deciduous Tree		Electric
	Electric Manhole		Gas
	Electric Riser		Overhead Utility
	Evergreen Tree		Sanitary
	Hand Hole		Storm
	Hydrant		Telephone
	Light Pole		Watermain
	Manhole		Fence
	Post		Tree Canopy
	Phone Riser		Shrub Line - Deciduous
	Sign		Alphalt
	Sanitary Sewer Manhole		Concrete
	Stormwater Manhole		Building



- Sanitary Manhole #22768**  
 SAN 22768  
 4" Structure  
 Rim Elev. = 841.50  
 12" Inv. (W) = 834.34
- Sanitary Manhole #22769**  
 SAN 22769  
 4" Structure  
 Rim Elev. = 841.59  
 12" Inv. (E) = 777.77  
 12" Inv. (N) = 777.77
- Sanitary Manhole #1036**  
 SAN 1036  
 4" Structure  
 Rim Elev. = 844.23  
 6" Inv. (NW) = 836.85  
 10" Inv. (NE) = 836.75
- Sanitary Manhole #998**  
 SAN 998  
 4" Structure  
 Rim Elev. = 841.55  
 6" Inv. (NE) = 838.28  
 6" Inv. (SE) = 838.28
- Storm Manhole #997**  
 STO 997  
 4" Structure  
 Rim Elev. = 841.60  
 6" Conc. (SE) = 835.02  
 15" Conc. (E) = 835.02
- Storm Manhole #995**  
 STO 995  
 4" Structure  
 Rim Elev. = 844.25  
 15" Conc. (W) = 834.00  
 8" Conc. (NW) = 839.15  
 15" Conc. (NE) =
- Storm Catch Basin #1**  
 4" Structure  
 Rim Elev. = 843.32  
 Water = 839.02

**BENCHMARKS**

**BENCHMARK #1** ELEV. = 844.53 (MSU DATUM - NGVD29)  
 Set benchmark, Top Northwesterly flange bolt under "M" in made to hydrant, West side of Chestnut Road, across from the I.M. outdoor pool.

**BENCHMARK #2** ELEV. = 841.94 (MSU DATUM - NGVD29)  
 Set benchmark, Easterly most point on the concrete base to the emergency phone East side of Chestnut Road near the Northwest corner of the I.M. outdoor pool.

**SURVEYOR'S NOTES**

- 1) Source information from plans and markings has been combined with observed evidence of utilities to develop a view of the underground utilities. However, lacking excavation, the exact location of underground features cannot be accurately, completely, and reliably depicted. In addition, in some jurisdictions, 811 or other similar utility locate requests from surveyors may be ignored or result in an incomplete response. Where additional or more detailed information is required, the client is advised that excavation and/or a private utility locate request may be necessary. These locations should not be interpreted to be exact locations nor should it be assumed that they are the only utilities in this area.
- 2) NOTE TO CONTRACTORS: 3 (THREE) WORKING DAYS BEFORE YOU DIG, CALL MISS DIG AT TOLL FREE 1-800-482-7171 FOR UTILITY LOCATIONS ON THE GROUND.
- 3) For this project we referenced BM\_204, BM\_219 and BM\_205.

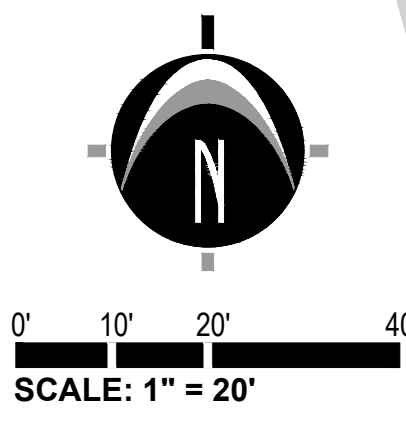
MARCH 5, 2019  
 Date:  
 Jonathon C. Wildrom  
 Jonathon C. Wildrom, PS 54059



**811 Know what's below. CALL before you dig.**

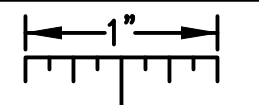
UTILITY LOCATIONS ARE DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

NOTE: EXISTING UTILITIES AND SERVICE LINES IDENTIFIED AS "UTILITY" WERE OBTAINED FROM AVAILABLE CITY RECORDS DRAWINGS. THE CONTRACTOR SHALL VERIFY THE LOCATION, DEPTH AND STATUS OF ALL UTILITIES AND SERVICE LINES PRIOR TO ANY CONNECTIONS.



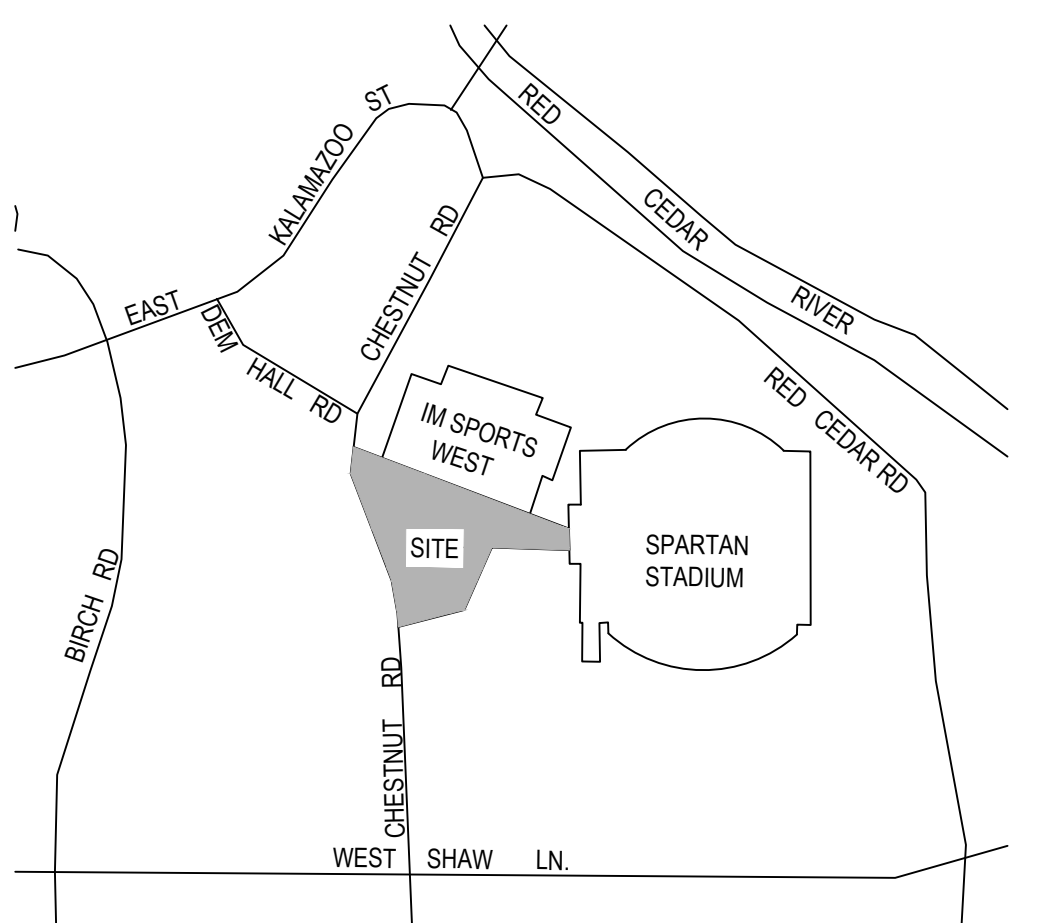
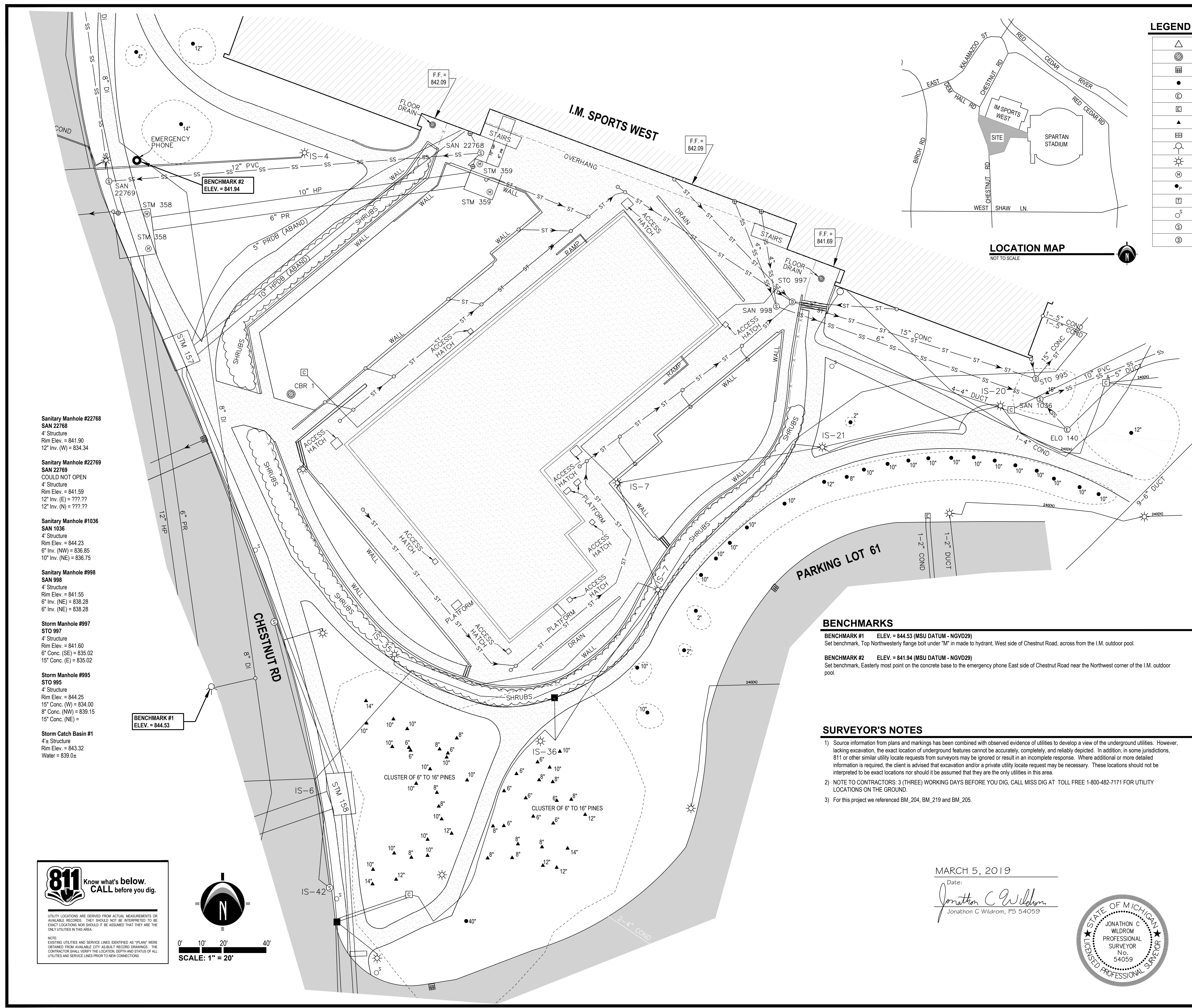
c:\Users\cotlinjackson\beckett & raeder, inc\lri la - documents\msu west im pool demo parking lot 2023\Drawings\current drawings\EC100.dwg, EC101, 3/13/2024 2:49:59 PM, Cotlin Jackson, AutoCAD PDF (General Documentation).pc3

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



Beckett & Raeder  
 Landscape Architecture  
 10000 E. Grand Ave. Suite 100  
 Denver, CO 80231

Infrastructure Planning and Facilities  
**MICHIGAN STATE UNIVERSITY**



**LEGEND**

	Benchmark		Telephone Manhole
	Catch Basin - Round		Water Valve
	Catch Basin - Square		Cable TV
	Deciduous Tree		Electric
	Electric Manhole		Gas
	Electric Riser		Overhead Utility
	Evergreen Tree		Sanitary
	Hand Hole		Storm
	Hydrant		Telephone
	Light Pole		Waterman
	Manhole		Fence
	Post		Tree Canopy
	Phone Riser		Shrub Line - Deciduous
	Sign		Asphalt
	Sanitary Sewer Manhole		Concrete
	Stormwater Manhole		Building

- Sanitary Manhole #22768**  
 SAN 22768  
 4' Structure  
 Rim Elev. = 841.90  
 12" Inv. (W) = 834.34
- Sanitary Manhole #22769**  
 SAN 22769  
 COULD NOT OPEN  
 4' Structure  
 Rim Elev. = 841.59  
 12" Inv. (E) = 777.77  
 12" Inv. (N) = 777.77
- Sanitary Manhole #1036**  
 SAN 1036  
 4' Structure  
 Rim Elev. = 844.23  
 6" Inv. (NW) = 836.85  
 10" Inv. (NE) = 836.75
- Sanitary Manhole #998**  
 SAN 998  
 4' Structure  
 Rim Elev. = 841.55  
 6" Inv. (NE) = 838.28  
 6" Inv. (SE) = 838.28
- Storm Manhole #997**  
 STO 997  
 4' Structure  
 Rim Elev. = 841.60  
 6" Conc. (SE) = 835.02  
 15" Conc. (E) = 835.02
- Storm Manhole #995**  
 STO 995  
 4' Structure  
 Rim Elev. = 844.25  
 15" Conc. (W) = 834.00  
 8" Conc. (NW) = 839.15  
 15" Conc. (NE) =
- Storm Catch Basin #1**  
 4 1/2' Structure  
 Rim Elev. = 843.32  
 Water = 839.0±

**BENCHMARKS**

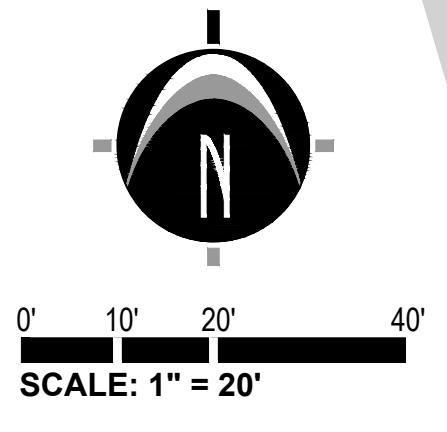
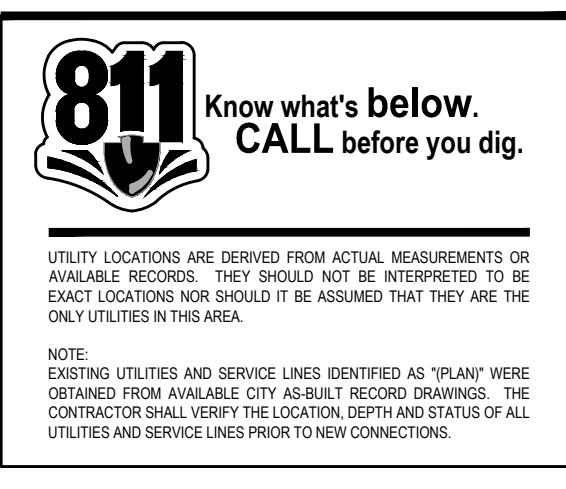
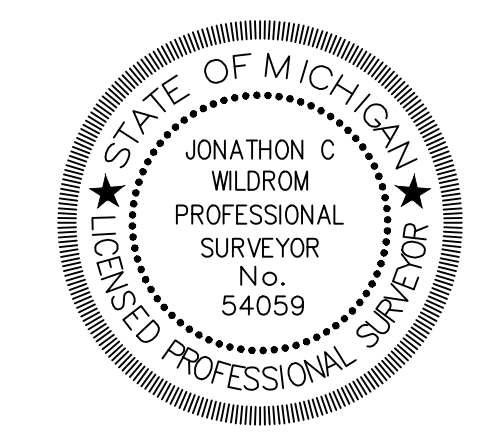
**BENCHMARK #1** ELEV. = 844.53 (MSU DATUM - NGVD29)  
 Set benchmark, Top Northwest flange bolt under "M" in made to Hydrant, West side of Chestnut Road, across from the I.M. outdoor pool.

**BENCHMARK #2** ELEV. = 841.94 (MSU DATUM - NGVD29)  
 Set benchmark, Easterly most point on the concrete base of the emergency phone East side of Chestnut Road near the Northwest corner of the I.M. outdoor pool.

**SURVEYOR'S NOTES**

- 1) Source information from plans and markings has been combined with observed evidence of utilities to develop a view of the underground utilities. However, lacking excavation, the exact location of underground features cannot be accurately, completely, and reliably depicted. In addition, in some jurisdictions, 811 or other similar utility locate requests from surveyors may be ignored or result in an incomplete response. Where additional or more detailed information is required, the client is advised that excavation and/or a private utility locate request may be necessary. These locations should not be interpreted to be exact locations nor should it be assumed that they are the only utilities in this area.
- 2) NOTE TO CONTRACTORS: 3 (THREE) WORKING DAYS BEFORE YOU DIG, CALL MISS DIG AT TOLL FREE 1-800-482-7171 FOR UTILITY LOCATIONS ON THE GROUND.
- 3) For this project we referenced BM\_204, BM\_219 and BM\_205.

MARCH 5, 2019  
 Date:  
 Jonathon C. Wilkrom  
 Jonathon C. Wilkrom, PS 5-4099

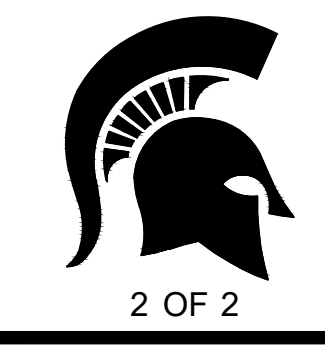


**MICHIGAN STATE UNIVERSITY**  
 Infrastructure Planning and Facilities

**I.M. SPORTS WEST  
 REFURBISH OUTDOOR POOL**

CAPITAL PROJ. NO.  
 CP18222

LEAD \_\_\_\_\_  
 ARCH. \_\_\_\_\_  
 MECH. \_\_\_\_\_  
 ELEC. \_\_\_\_\_  
 CIVIL \_\_\_\_\_  
 L.A. \_\_\_\_\_  
 INT. DES. \_\_\_\_\_  
 REP. \_\_\_\_\_  
 APPR. \_\_\_\_\_  
 DATE 1.28.2019  
 SCALE 1" = 20'  
 REVISIONS \_\_\_\_\_



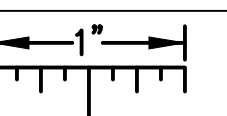
**LOT 61-SPARTAN STADIUM-WEST SIDE  
 BUILD PARKING LOT**

CAPITAL PROJ. NO.  
 CP23106

PRJ. MGR. A. LINEBAUGH  
 ARCH. \_\_\_\_\_  
 MECH. \_\_\_\_\_  
 ELEC. G. HALSEY  
 CIVIL S. LAUGHLIN  
 L.A. D. WILBER  
 INT. DES. \_\_\_\_\_  
 CONST. REP. A. LINEBAUGH  
 APPR. \_\_\_\_\_  
 DATE 03-13-2024  
 SCALE 1" = 20'  
 REVISIONS  
 50% CD REVIEW  
 95% CD REVIEW  
 BIDS

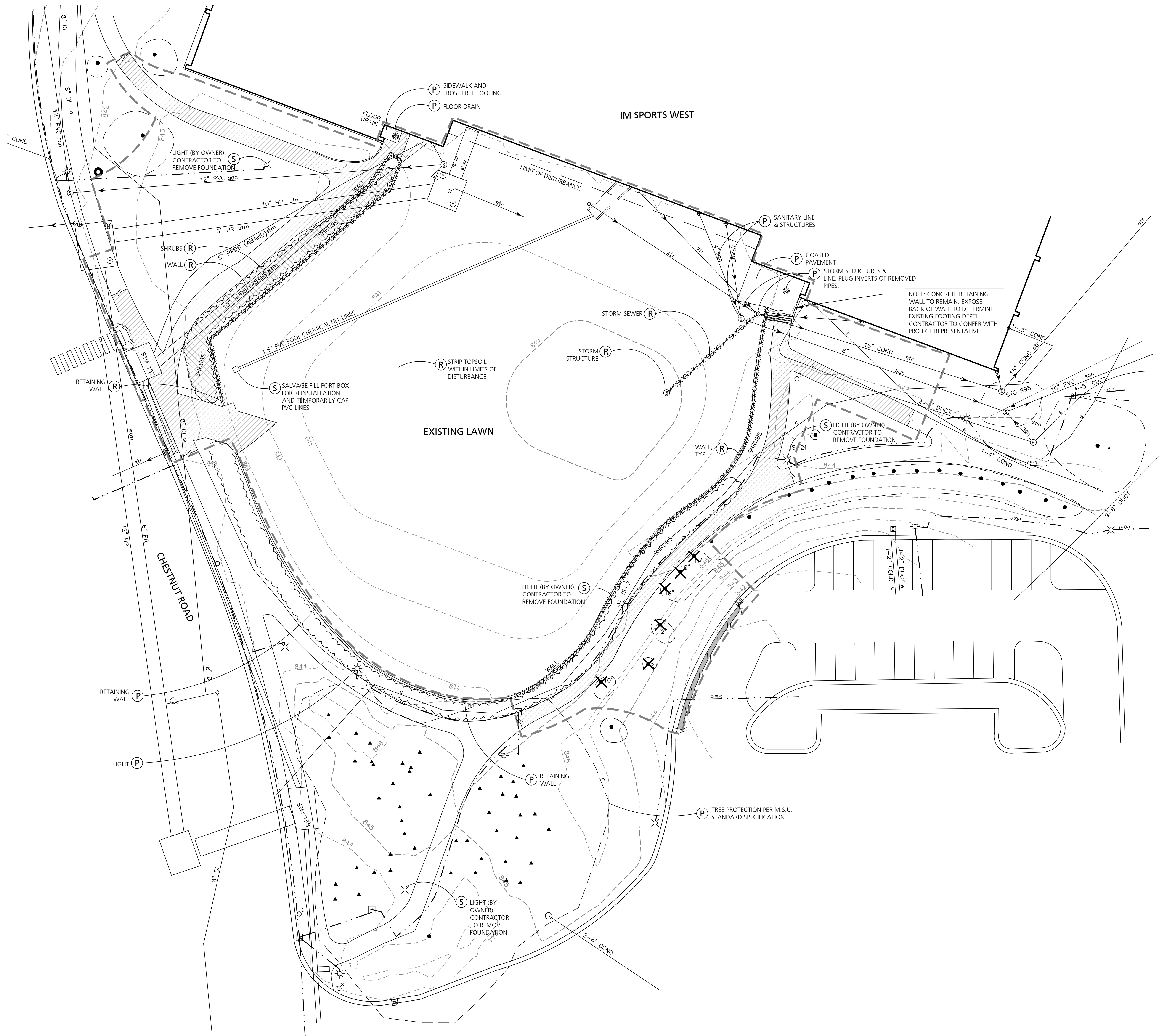
EXISTING  
 CONDITIONS SURVEY  
**EC102**

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



**Beckett & Raeder**  
 Landscape Architecture  
 1000 W. Main St., Suite 101  
 Ann Arbor, MI 48106

**MICHIGAN STATE UNIVERSITY**  
 Infrastructure Planning and Facilities



**DEMOLITION LEGEND**

- REMOVE EXISTING CONCRETE
- REMOVE EXISTING BITUMINOUS PAVEMENT
- REMOVE EXISTING LAWN & PLANTING BEDS
- REMOVE SHRUBS
- REMOVE UTILITY
- REMOVE CURB/RETAINING WALL
- SAWCUT
- LIMIT OF DISTURBANCE
- REMOVE ITEM
- PROTECT ITEM
- SALVAGE ITEM TO OWNER
- REMOVE TREE (BY OWNER)

**DEMOLITION NOTES**

1. CONTRACTOR SHALL CALL MISS DIG (811) A MINIMUM OF THREE WORKING DAYS PRIOR TO START OF CONSTRUCTION.
2. CONTRACTOR SHALL INVESTIGATE EXTENT AND LOCATION OF EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR PROTECTION AND RESTORATION OF SAME IF DAMAGED AS A RESULT OF CONTRACTOR'S OPERATIONS.
3. ALL ITEMS NOT INDICATED FOR REMOVAL SHALL REMAIN UNDISTURBED AND PROTECTED. CONTRACTOR SHALL FULLY RESTORE ANY ITEMS/MATERIALS DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.
4. ALL CONCRETE PAVEMENT AND CURB REMOVALS SHALL BE TO THE NEAREST JOINT BEYOND INDICATED EXTENT.
5. CONTRACTOR SHALL MAINTAIN CLEAN SAW CUT EDGES FOR PROPOSED WORK TO ABUT. BROKEN EDGES RESULTING FROM CONTRACTOR'S FAILURE TO PROTECT THE EDGE WILL BE SAW CUT BEYOND THE BREAKS AT THE NEAREST JOINT, AT THE CONTRACTOR'S EXPENSE.
6. ALL REMOVALS SHALL BE SAW CUT FULL DEPTH AND COORDINATED WITH LAYOUT / GRADING PLANS.
7. REMOVALS SHALL INCLUDE SUBSOIL/EXISTING BASE MATERIALS TO FULL DEPTH REQUIRED FOR INSTALLATION OF NEW WORK INCLUDING BASE COURSE. ALL EXCAVATIONS SHALL PROVIDE ADEQUATE SOIL SUPPORT THROUGH THE USE OF ADEQUATE CUT SLOPES OR STRUCTURAL SHORING.
8. OWNER TO COORDINATE WITH RESPECTIVE UTILITY COMPANY FOR REMOVAL OF EXISTING TRANSFORMER, ELECTRICAL, CABLE, TELEPHONE AND FIBER OPTIC LINES.
9. PROJECT AREA IS PARTIALLY IRRIGATED. REMOVE EQUIPMENT AFFECTED BY NEW WORK AND SALVAGE TO OWNER. CUT, CAP AND RECORD LOCATIONS OF ALL LINES.
10. CONTRACTOR SHALL REPAIR ALL DISTURBED TURF AREAS OUTSIDE OF PROJECT LIMITS DAMAGED DURING CONSTRUCTION.
11. ALL TOPSOIL AND ORGANIC MATERIAL SHALL BE REMOVED FROM UNDER PROPOSED BUILDING, FOOTINGS, SLABS, AND PAVED AREAS.
12. ALL SPOIL MATERIAL, INCLUDING TOPSOIL, TO BE REMOVED OFF SITE AND DISPOSED IN A LEGAL MANNER.
13. DISCHARGE OF WATER, DUST, OR DEBRIS FROM CONCRETE AND ASPHALT WORK TO STORM OR SANITARY SYSTEMS IS PROHIBITED.
14. STORM DRAINS MUST BE PROTECTED FROM DUST AND DEBRIS.
15. ANY WATER USED DURING CONCRETE AND ASPHALT WORK (INCLUDING SWEEPING AND SAWCUTTING) MUST BE CONTAINED AND COLLECTED FOR PROPER DISPOSAL. SUGGESTED CONTROLS INCLUDE WET VACUUM OR ABSORBENTS.
16. PRIOR TO BEGINNING THE CONSTRUCTION, THE CONTRACTOR SHALL INSTALL THE NECESSARY LANE CLOSURE SIGNS, SIDEWALK CLOSED AHEAD WARNING SIGNS, SOIL EROSION AND SEDIMENTATION CONTROL PRODUCTS, AND CHAIN LINK CONSTRUCTION FENCE IN ACCORDANCE WITH THE SPECIFICATIONS AND AS INDICATED ON THE DRAWINGS. SITE CONSTRUCTION FENCE IS THE LIMIT OF WORK. THERE SHALL BE NO CONTRACTOR ACTIVITY BEYOND CONSTRUCTION FENCING.
17. THE CONTRACTOR IS TO FOLLOW THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.M.U.T.C.D.) FOR LANE CLOSURES. ALL LANE CLOSURE SIGNS, WARNING SIGNS, SOIL EROSION AND SEDIMENTATION CONTROL PRODUCTS, AND CHAIN LINK CONSTRUCTION FENCE SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE PROJECT'S DURATION.
  - a. "CONSTRUCTION AHEAD" WARNING SIGNS ARE TO BE INSTALLED IN ACCORDANCE WITH M.M.U.T.C.D. FOR THE PROJECT'S DURATION. FINAL LOCATIONS ARE TO BE APPROVED BY THE OWNER.
  - b. INSTALL ADVANCE WARNING SIGNS (I.E., SIDEWALK CLOSED AHEAD, USE ALTERNATE ROUTE) ON ALL SIDEWALKS CROSSING THE WORK ZONE.
  - c. INSTALL FLASHERS WITH CAUTION TAPE ON THE INSIDE OF CONSTRUCTION FENCE AT ALL BLOCKED SIDEWALK CROSSINGS IN ACCORDANCE WITH M.S.U. SPECIFICATIONS.
18. ALL SITE DEMOLITION OPERATIONS SHALL CONFORM TO M.S.U. SPECIFICATION SECTION 024113.
19. IMMEDIATELY CONTACT PROJECT REPRESENTATIVE WHEN EXISTING TREE ROOTS ARE EXPOSED. ANY TREE ROOT PRUNING PRIOR TO PAVEMENT DEMOLITION IS TO BE PERFORMED PER MSU STANDARD SPECIFICATIONS.
20. STRIP ALL TOPSOIL WITHIN THE LIMITS OF WORK AS INDICATED ON PLAN. HAUL AND STOCKPILE ALL STRIPPED TOPSOIL TO BEAUMONT LANDSCAPE SUPPLY. FOLLOW STOCKPILING GUIDELINES AS INDICATED ON THE S.E.S.C. PLANS AND SPECIFICATIONS.
21. LIMITS OF TOPSOIL TO BE STRIPPED AND STOCKPILED ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR THE PLACING OF TOPSOIL WITHIN THE PROJECT LIMITS. LAWN SEEDING SHALL BE PER MSU STANDARD SPECIFICATIONS.

**IRRIGATION DEMOLITION NOTES**

1. REMOVE IRRIGATION SYSTEM AS REQUIRED FOR NEW WORK.
2. CUT AND CAP EXISTING MAIN LINES SERVICING THE PROJECT AREA AND DOCUMENT LOCATIONS.
3. PROVIDE RESTORATIVE WORK AS REQUIRED TO MAINTAIN IRRIGATION FUNCTION OUTSIDE THE PROJECT AREA.
4. COORDINATE ALL IRRIGATION WORK WITH OWNER.

**SPECIFICATION NOTES**

1. ALL WORK AND MATERIALS SHALL CONFORM TO MICHIGAN STATE UNIVERSITY STANDARD SPECIFICATIONS FOR CONSTRUCTION UNLESS SPECIFICALLY NOTED OR DETAILED OTHERWISE ON DRAWINGS.

**LOT 61-SPARTAN STADIUM-WEST SIDE BUILD PARKING LOT**

CAPITAL PROJ. NO.  
CP23106

PRJ. MGR. A. LINEBAUGH  
 ARCH. \_\_\_\_\_  
 MECH. \_\_\_\_\_  
 ELEC. G. HALSEY  
 CIVIL S. LAUGHLIN  
 L.A. D. WILBER  
 INT. DES. \_\_\_\_\_  
 CONST. REP. A. LINEBAUGH  
 APPR. \_\_\_\_\_  
 DATE 03-13-2024  
 SCALE 1" = 20'

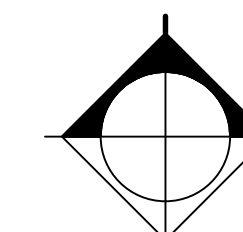
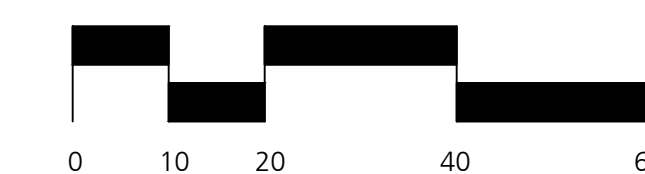
REVISIONS

50% CD REVIEW  
 95% CD REVIEW  
 BIDS

DEMOLITION PLAN

C200

05 OF 20



c:\Users\collinjackson\beckett & raeder, inc\lri la - documents\msu west tm pool demo parking lot 2023\Draws\current drawings\C200 Demo.dwg, C200\_3/13/2024 6:49:57 PM, Collin Jackson, Note

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



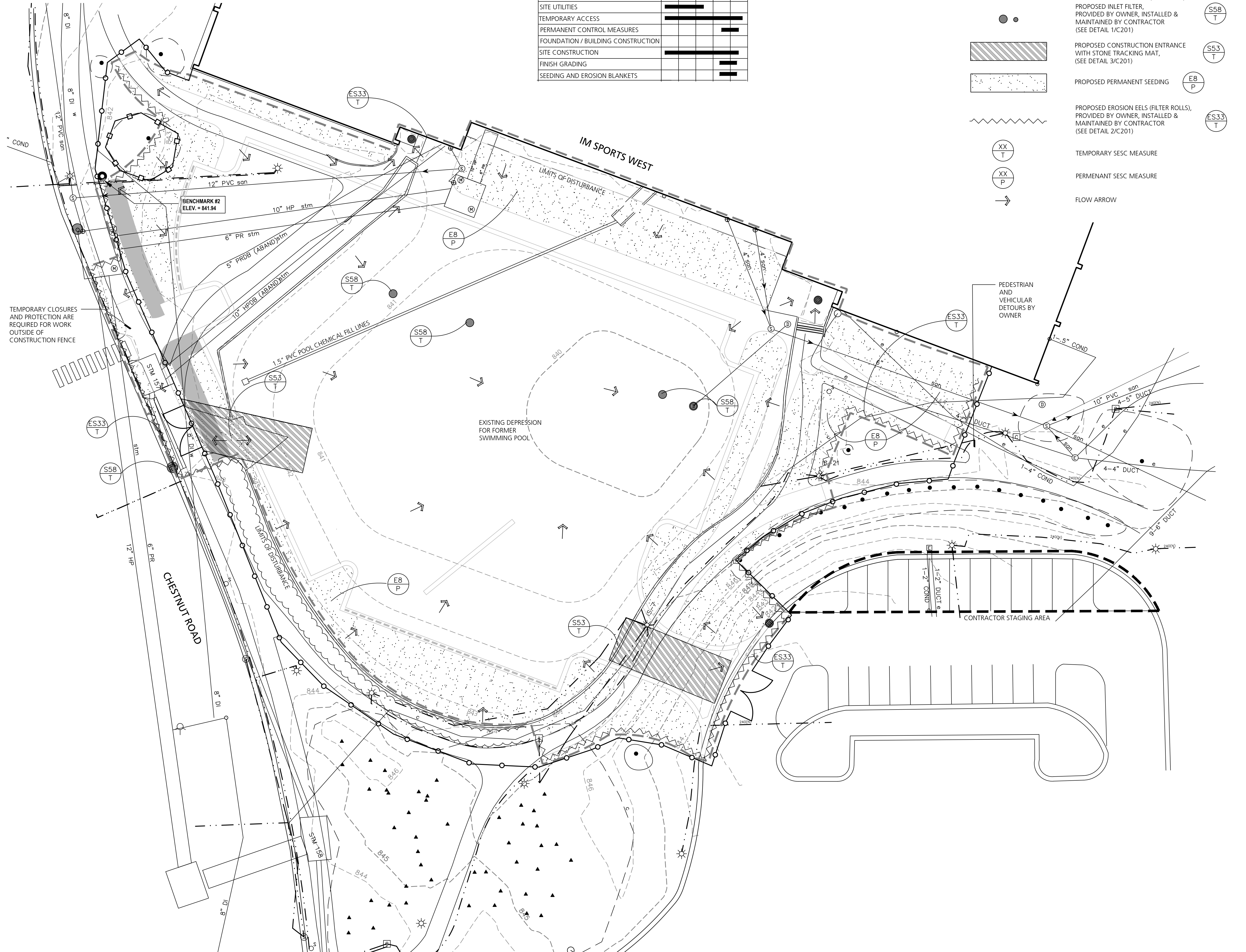
CONSTRUCTION SEQUENCE	OPERATION TIME SCHEDULE 2024				
	APR	MAY	JUN	JUL	AUG
TEMPORARY CONTROL MEASURES	█	█	█	█	█
TOPSOIL / SEDIMENT CONTROL	█	█	█	█	█
SITE UTILITIES	█	█	█	█	█
TEMPORARY ACCESS	█	█	█	█	█
PERMANENT CONTROL MEASURES					
FOUNDATION / BUILDING CONSTRUCTION					
SITE CONSTRUCTION					
FINISH GRADING					
SEEDING AND EROSION BLANKETS					

SESC LEGEND	
	LIMITS OF DISTURBANCE
	CONSTRUCTION FENCE
	TREE PROTECTION FENCE (BY OWNER)
	PROPOSED INLET FILTER, PROVIDED BY OWNER, INSTALLED & MAINTAINED BY CONTRACTOR (SEE DETAIL 1/C201)
	PROPOSED CONSTRUCTION ENTRANCE WITH STONE TRACKING MAT, (SEE DETAIL 3/C201)
	PROPOSED PERMANENT SEEDING
	PROPOSED EROSION EELS (FILTER ROLLS), PROVIDED BY OWNER, INSTALLED & MAINTAINED BY CONTRACTOR (SEE DETAIL 2/C201)
	TEMPORARY SESC MEASURE
	PERMANENT SESC MEASURE
	FLOW ARROW

- ### SESC NOTES
- THE CONTRACTOR SHALL COMPLY WITH ALL CONTRACT DOCUMENTS, APPROVED SOIL EROSION AND SEDIMENTATION CONTROL (S.E.S.C.) PLANS, PERMIT CONDITIONS AND WITH PARTS 31 AND 91 OF PUBLIC ACT 451 OF 1994. THE OWNER SHALL OBTAIN S.E.S.C. PERMIT FROM THE APPROPRIATE PERMITTING AND ENFORCING AGENCY. PERMIT FEES AND ROUTINE INSPECTIONS CHARGED BY THE M.E.A. (MUNICIPAL ENFORCING AGENCY), C.E.A. (COUNTY ENFORCING AGENCY), AND M.D.E.Q. (MICHIGAN DEPARTMENT OF ENVIRONMENT QUALITY) WILL BE PAID BY THE OWNER OR THEIR REPRESENTATIVE.
  - PRIOR TO BEGINNING ANY EARTH CHANGE, THE CONTRACTOR SHALL RETAIN A M.D.E.Q. CERTIFIED STORM WATER OPERATOR (C.S.W.O.) TO PROVIDE THE REQUIRED S.E.S.C. REPORTS (WHICH INCLUDE THE WEEKLY AND STORM EVENT REPORTS THAT RESULTS IN A DISCHARGE FROM THE SITE, AS WELL AS ALL FOLLOW UP REPORTS FOR BOTH VIOLATIONS AND STORM EVENT CORRECTIONS) ON THE STANDARD M.D.N.R.E. FORM. THE CONTRACTOR SHALL PROVIDE THE REPORTS TO THE OWNER ON A WEEKLY BASIS, AND RETAIN THOSE REPORTS FOR THREE YEARS. COPIES OF THE REPORTS NEED TO BE AVAILABLE ON SITE WHILE S.E.S.C. PERMIT IS OPEN.
  - PRIOR TO BEGINNING ANY EARTH CHANGE, THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL S.E.S.C. MEASURES AS SHOWN ON THE APPROVED CONTRACT DOCUMENTS AND AS DIRECTED BY THE OWNER, C.S.W.O., M.E.A./C.E.A., OR M.D.E.Q. AT ANYTIME DURING THE LIFE OF THE CONTRACT OR THE OWNER TAKES OVER THE RESPONSIBILITY FOR THE SITE. IMMEDIATELY PRIOR TO THE OWNER TAKING RESPONSIBILITY FOR THE SITE, THE CONTRACTOR WILL BE REQUIRED TO CLEAN ALL CATCH BASINS AFFECTED BY THE CONSTRUCTION, BOTH WITHIN THE CONTRACT LIMITS AND ALL SURROUNDING ROADS AND LAWN AREAS WHERE SOIL MAY HAVE SPREAD AS A RESULT OF CONSTRUCTION ACTIVITIES.
  - THE CONTRACTOR SHALL CONDUCT ALL EXCAVATION, FILLING, GRADING, AND CLEAN UP OPERATIONS IN A MANNER SUCH THAT SEDIMENT GENERATED BY WIND OR WATER IS NOT DISCHARGED INTO STORM SEWER, DRAINAGE DITCH, RIVER, LAKE, AIR UNDERGROUND UTILITY SYSTEM. STAGE WORK TO MINIMIZE THE AREA OR EXPOSED SOIL, THEREBY REDUCING THE OPPORTUNITY FOR SOIL EROSION.
  - SHOULD VIOLATIONS BE IDENTIFIED BY THE C.S.W.O., M.E.A./C.E.A., OR M.D.E.Q., THEY SHALL BE CORRECTED WITHIN 24 HOURS OF NOTIFICATION. THE CORRECTIONS SHALL BE APPROVED BY THE OWNER, C.S.W.O., M.E.A./C.E.A., OR M.D.E.Q. ALL SUBSEQUENT INSPECTIONS PERFORMED BY THE OWNER, C.S.W.O., M.E.A./C.E.A., OR M.D.E.Q. AS A RESULT OF THE VIOLATION (AND ANY OTHER ASSOCIATED COSTS) WILL BE PAID BY THE CONTRACTOR. IF IDENTIFIED VIOLATIONS ARE NOT CORRECTED WITHIN 24 HOURS OF WRITTEN NOTICE, THE OWNER OR CITY OF EAST LANSING WILL MAKE THE REQUIRED REPAIRS WITHOUT FURTHER NOTIFICATION, AT THE CONTRACTORS EXPENSE.
  - FINES ASSESSED AS A RESULT OF THE VIOLATION FOR NON-COMPLIANCE OF THE S.E.S.C. PROVISIONS WILL BE PAID BY THE OWNER OR CONTRACTOR. SHOULD A "STOP WORK" ORDER FOR NON-COMPLIANCE BE ISSUED, A TIME EXTENSION REQUEST FOR THAT PERIOD WILL NOT BE GRANTED (FINES COULD BE ASSESSED UP TO AND INCLUDING \$25,000.00 PER DAY FOR EACH VIOLATION).
  - IF SEDIMENT EXTENDS BEYOND THE PROJECT LIMITS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEAN UP AND RESTORATION OF ALL SURFACES AND UTILITY SYSTEMS TO THE CONDITION THAT EXISTED PRIOR TO THE CONTRACT AWARD.
  - ALL S.E.S.C. MEASURES SHALL BE MAINTAINED ON A DAILY BASIS.
  - SUBJECT SITE IS NOT WITHIN 500 FEET OF RIVER, STREAM, DRAIN AND/OR WETLANDS. THE NEAREST STREAM, LAKE, OR DRAINAGE CHANNEL IS THE RED CEDAR RIVER 850' ± TO THE NORTHEAST.
  - THERE ARE NO WETLANDS ON AND IMMEDIATELY ADJACENT TO THE PROJECT SITE.
  - TOTAL ACRES OF THE PROJECT DISTURBED: 1.55 ACRES
  - THE CUT AND FILL OF THIS PROJECT IS BALANCED.
  - NOTE: CONTRACTOR SHALL DETERMINE THEIR OWN QUANTITIES OF EXCAVATED MATERIAL AND SEQUENCE OF EVENTS.
  - STRIP ALL TOPSOIL WITHIN THE LIMITS OF WORK AS INDICATED ON DEMOLITION PLAN. HAUL ALL STRIPPED TOPSOIL AT BEAUMONT LANDSCAPE SUPPLY.
  - SOIL TYPE: UPA - URBAN LAND - CAPAC - COLWOOD COMPLEX, 0 TO 4 PERCENT SLOPES AND URBAN LAND - BOYER - SPINKS COMPLEX, 0 TO 10 PERCENT SLOPES, IDENTIFIED WITHIN THE PROJECT AREA BASED ON USDA-NRCS AVAILABLE DATA IDENTIFIED WITHIN THE PROJECT AREA BASED ON USDA-NRCS AVAILABLE DATA.
  - ALL DISTURBED AREAS SHALL RECEIVE PERMANENT EROSION CONTROL MEASURES WITHIN 5 DAYS OF FINAL GRADING.
  - STORM WATER FROM SUBJECT SITE WILL NOT ADVERSELY IMPACT ADJACENT PROPERTIES.
  - CONSTRUCTION ACCESS ROAD WILL BE PROTECTED WITH CRUSHED STONE OR CONCRETE, AGGREGATE SIZE, 1" TO 2" AND MAINTAINED IN GOOD CONDITION AT ALL TIMES THROUGHOUT THE CONSTRUCTION PROJECT.
  - DIRT OR MUD TRACKED OR CAUSED BY EROSION ONTO PAVED AREAS OR HARD SURFACES SHALL BE PROMPTLY REMOVED AND SURFACE BE BROOM CLEAN.
  - WATER FROM TRENCHES AND OTHER EXCAVATIONS SHALL BE PUMPED INTO A FILTRATION BAG TO REMOVE SEDIMENT FROM THE WATER.
  - A WATER TRUCK SHALL BE AVAILABLE TO WATER DOWN SITE AS REQUIRED TO MAINTAIN DUST CONTROL.

- ### SPECIFICATION NOTES
- ALL WORK AND MATERIALS SHALL CONFORM TO MICHIGAN STATE UNIVERSITY STANDARD SPECIFICATIONS FOR CONSTRUCTION UNLESS SPECIFICALLY NOTED OR DETAILED OTHERWISE ON DRAWINGS.

KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
<b>EROSION CONTROLS</b>			
E6	MULCH		For use in areas subject to erosion surface flows or severe wind or on newly seeded areas.
E8	PERMANENT SEEDING		Stabilization method utilized on sites where earth change has been completed (final grading attained).
<b>EROSION / SEDIMENT CONTROLS</b>			
ES33	FILTER ROLLS		In areas requiring immediate protection of slopes against surface erosion and gully formation and for perimeter sediment control.
<b>SEDIMENT CONTROLS</b>			
SS3	STABILIZED CONSTRUCTION ACCESS		Used at every point where construction traffic enters or leaves a construction site.
SS8	INLET PROTECTION FABRIC DROP		Use at stormwater inlets, especially at construction sites.

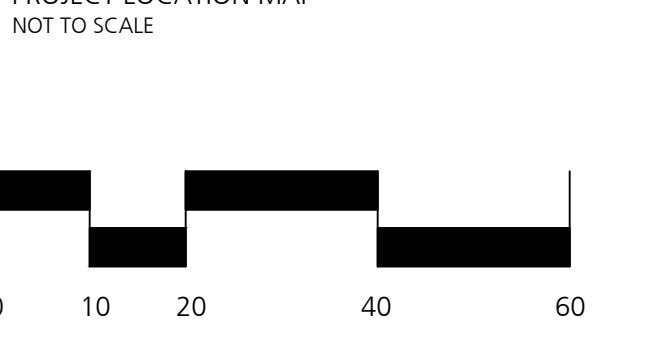
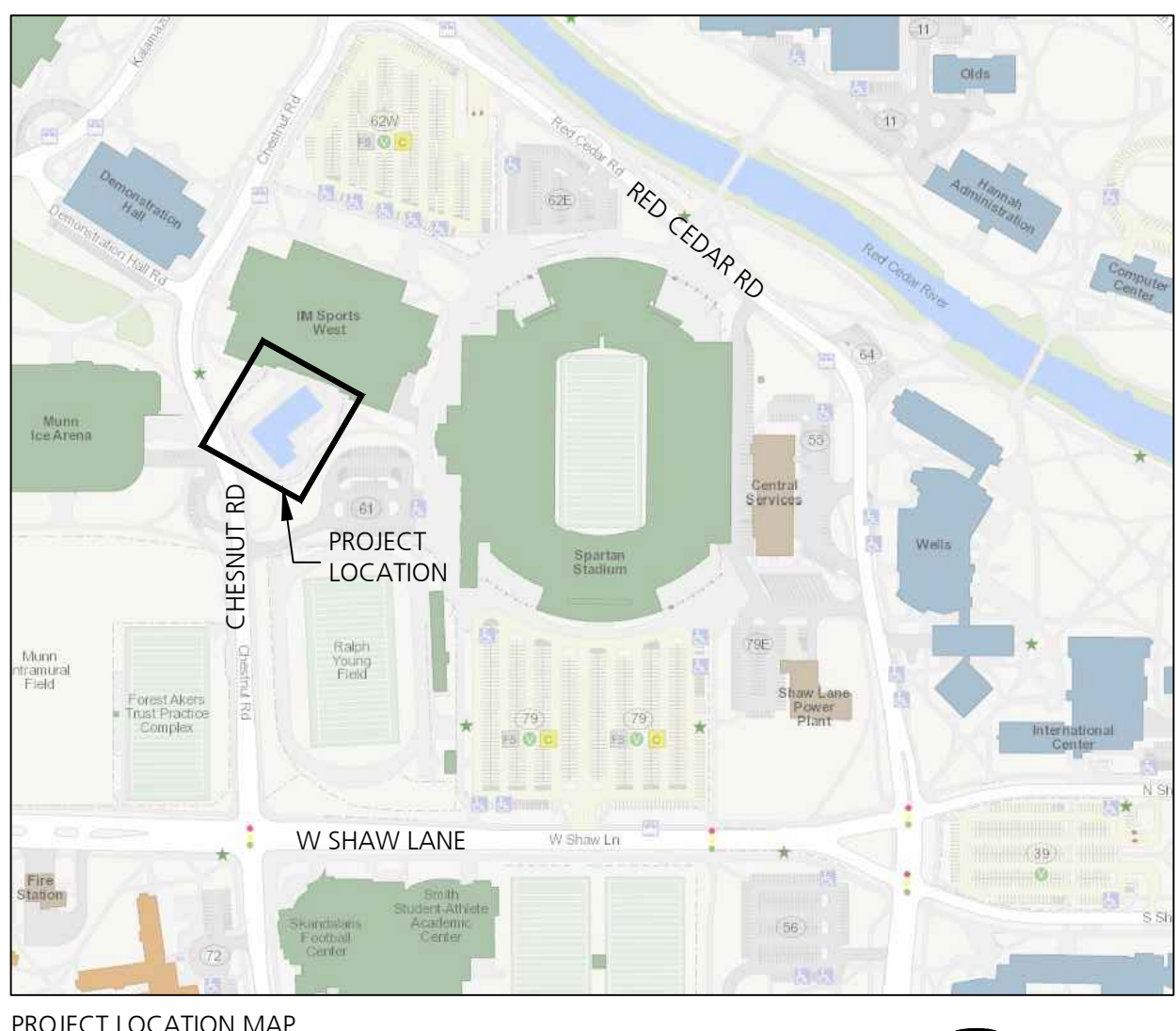


TEMPORARY SESC CONTROLS MAINTENANCE SCHEDULE (DURING CONSTRUCTION BY CONTRACTOR)

TASK	COMPONENT	SCHEDULE
INSPECT FOR SEDIMENT ACCUMULATION	STORM SEWER SYSTEM	WEEKLY
REMOVAL OF SEDIMENT ACCUMULATION	CATCH BASIN SLUICES AND TRENCH DRAINS	AS NEEDED AND PRIOR TO TURNOVER
INSPECT FOR FLOATABLES AND DEBRIS	CATCH BASIN INLET CASTINGS	QUARTERLY AND AT TURNOVER
REMOVAL OF FLOATABLES AND DEBRIS	INTEGRATION BEDS	QUARTERLY AND AT TURNOVER
INSPECT FOR EROSION	YARD BASIN OVERFLOW STRUCTURES	AS NEEDED AND PRIOR TO TURNOVER
RE-ESTABLISH VEGETATION		AS NEEDED AND PRIOR TO TURNOVER
CLEANING STREETS/PAVEMENT		AS NEEDED
VACUUM TO REMOVE SEDIMENT		AS NEEDED AND PRIOR TO TURNOVER
MOWING AND/OR PLANTING MAINTENANCE		AS NEEDED AND PRIOR TO TURNOVER
INSPECT STRUCTURAL ELEMENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS (BY PROFESSIONAL ENGINEER)		ANNUALLY AND PRIOR TO TURNOVER
MAKE ADJUSTMENTS OR REPLACEMENTS AS DETERMINED BY PRE-TURNOVER INSPECTION		AS NEEDED

PERMANENT SESC CONTROLS MAINTENANCE SCHEDULE (POST CONSTRUCTION BY OWNER)

TASK	COMPONENT	SCHEDULE
INSPECT FOR SEDIMENT ACCUMULATION	STORM SEWER SYSTEM	WEEKLY
REMOVAL OF SEDIMENT ACCUMULATION	CATCH BASIN SLUICES AND TRENCH DRAINS	AS NEEDED AND PRIOR TO TURNOVER
INSPECT FOR FLOATABLES AND DEBRIS	CATCH BASIN INLET CASTINGS	QUARTERLY AND AT TURNOVER
REMOVAL OF FLOATABLES AND DEBRIS	INTEGRATION BEDS	QUARTERLY AND AT TURNOVER
INSPECT FOR EROSION	YARD BASIN OVERFLOW STRUCTURES	AS NEEDED AND PRIOR TO TURNOVER
RE-ESTABLISH VEGETATION		AS NEEDED AND PRIOR TO TURNOVER
CLEANING STREETS/PAVEMENT		AS NEEDED
VACUUM TO REMOVE SEDIMENT		AS NEEDED AND PRIOR TO TURNOVER
MOWING AND/OR PLANTING MAINTENANCE		AS NEEDED AND PRIOR TO TURNOVER
INSPECT STRUCTURAL ELEMENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS (BY PROFESSIONAL ENGINEER)		ANNUALLY AND PRIOR TO TURNOVER
MAKE ADJUSTMENTS OR REPLACEMENTS AS DETERMINED BY PRE-TURNOVER INSPECTION		AS NEEDED



**Beckett & Raeder**  
 Infrastructure Planning and Facilities  
**MICHIGAN STATE UNIVERSITY**

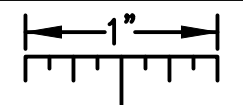
**LOT 61-SPARTAN STADIUM-WEST SIDE BUILD PARKING LOT**

CAPITAL PROJ. NO. CP23106  
 PRJ. MGR. A. LINEBAUGH  
 ARCH. \_\_\_\_\_  
 MECH. \_\_\_\_\_  
 ELEC. G. HALSEY  
 CIVIL S. LAUGHLIN  
 L.A. D. WILBER  
 INT. DES. \_\_\_\_\_  
 CONST. REP. A. LINEBAUGH  
 APPR. \_\_\_\_\_  
 DATE 03-13-2024  
 SCALE 1" = 20'  
 REVISIONS  
 50% CD REVIEW  
 95% CD REVIEW  
 BIDS

SESC PLAN  
**C201**  
 06 OF 20

c:\Users\collin.jackson\beckett & raeder, inc\proj\la - documents\msu west tm pool demo parking lot 2023\dwgs\current drawings\C201 SESC & DT.dwg, C201 SESC & DT.dwg, 3/13/2024 6:50:26 PM, Collin Jackson, AutoCAD PDF (General Documentation).p3

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



CAPITAL PROJ. NO. CP23106

PRJ. MGR. A. LINEBAUGH

ARCH. \_\_\_\_\_

MECH. \_\_\_\_\_

ELEC. G. HALSEY

CIVIL S. LAUGHLIN

L.A. D. WILBER

INT. DES. \_\_\_\_\_

CONST. REP. A. LINEBAUGH

APPR. \_\_\_\_\_

DATE 03-13-2024

SCALE 1" = 20'

REVISIONS

50% CD REVIEW

95% CD REVIEW

BIDS

SESC DETAILS

C202

**T65 FLEXSTORM CATCH-IT INLET FILTERS**  
 PRODUCT SELECTION AND SPECIFICATION DRAWING  
 (SEE PAGE 2 OF 2 FOR SIZING SELECTION)

**INLET FILTER**  
TYPICAL ROUND FILTER

**INLET FILTER**  
TYPICAL RECTANGULAR FILTER

**INLET FILTER**  
TYPICAL COMBINATION INLET FILTER W/ CURB GUARD

**NOTES:**

- ALL FRAMING IS CONSTRUCTED OF CORROSION RESISTANT STEEL (CING PLATED OR GALVANIZED) FOR 7 YEAR MINIMUM SERVICE LIFE.
- UPON ORDERING CONFIRMATION OF THE DOT CALLOUT, PRECAST OR CASTING MAKE AND MODEL, OR DETAILED DIMENSIONAL FORMS MUST BE PROVIDED TO CONFIGURE AND ASSEMBLE YOUR CUSTOMIZED FLEXSTORM INLET FILTER. PART NUMBER ALONE IS NOT SUFFICIENT.
- FOR WRITTEN SPECIFICATIONS AND MAINTENANCE GUIDELINES VISIT: [WWW.INLETFILTERS.COM](http://WWW.INLETFILTERS.COM)

ALL PRODUCTS MANUFACTURED BY INLET & PIPE PROTECTION, INC A DIVISION OF ADS, INC. [WWW.INLETFILTERS.COM](http://WWW.INLETFILTERS.COM) (866) 287-8655 PH (630) 355-3477 FX INFO@INLETFILTERS.COM

TYPE	INLET & PIPE PROTECTION, INC. (S&P) IRL	REV
C	FLEXSTORM_CATCH_IT	A

**T65 FLEXSTORM CATCH-IT INLET FILTERS**  
 PRODUCT SELECTION AND SPECIFICATION DRAWING  
 (SEE PAGE 1 OF 2 FOR DETAIL DRAWINGS)

STYLE	FRAME STYLE AND SIZE	Frame P/N:
ROUND	Small Round (up to 20" dia grates (A) dim)	625RD
	Med Round (20.1" - 26.0" dia grates (A) up to 26" dia openings (B))	626RD
	Large Round (26.1" - 31.0" dia grates (A) up to 30" openings (B))	627RD
	XL Round (31.1" dia - 37" dia grates (A) up to 37" dia openings (B))	628RD
RECT	Small Rect / Square (up to 18" x 18" (C) openings or 64" perimeter)	625SQ
	Med Rect / Square (up to 24" (B) x 24" (D) openings or 96" perimeter)	626SQ
	Large Rect / Square (up to 30" (B) x 24" (D) openings or 120" perimeter)	627SQ
	XL Rect / Square (up to 36" (B) x 24" (D) openings or 144" perimeter)	628SQ
COMBO	Small Rect / Square (w/ Rest string, shipped with Magnetic Curb Flaps)	625CB
	Med Rect / Square (w/ Rest string, shipped with Magnetic Curb Flaps)	626CB
	Large Rect / Square (w/ Rest string, shipped with Magnetic Curb Flaps)	627CB
	XL Rect / Square (w/ Rest string, shipped with Magnetic Curb Flaps)	628CB
W/HDAST	12" diameter Nyloplast castings (Stainless Steel Framing standard)	6212NV
	15" diameter Nyloplast castings (Stainless Steel Framing standard)	6215NV
	18" diameter Nyloplast castings (Stainless Steel Framing standard)	6218NV
	24" diameter Nyloplast castings (Stainless Steel Framing standard)	6224NV
	30" diameter Nyloplast castings (Stainless Steel Framing standard)	6230NV

**2. SELECT YOUR BAG PART NUMBER**

FLEXSTORM FILTER BAGS	(22" depth)	(12" depth)	Clean Water Flow Rate (GPM/Meter)	Min. A.O.S. (US/Sec)
FX Standard Woven Bag	FX	FX-S	200	40
DOT Non-Woven Bag	IL	IL-S	165	30

**3. CREATE YOUR FLEXSTORM INLET FILTER PART NUMBER**

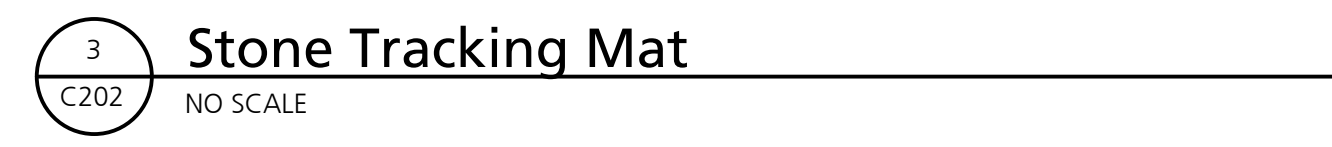
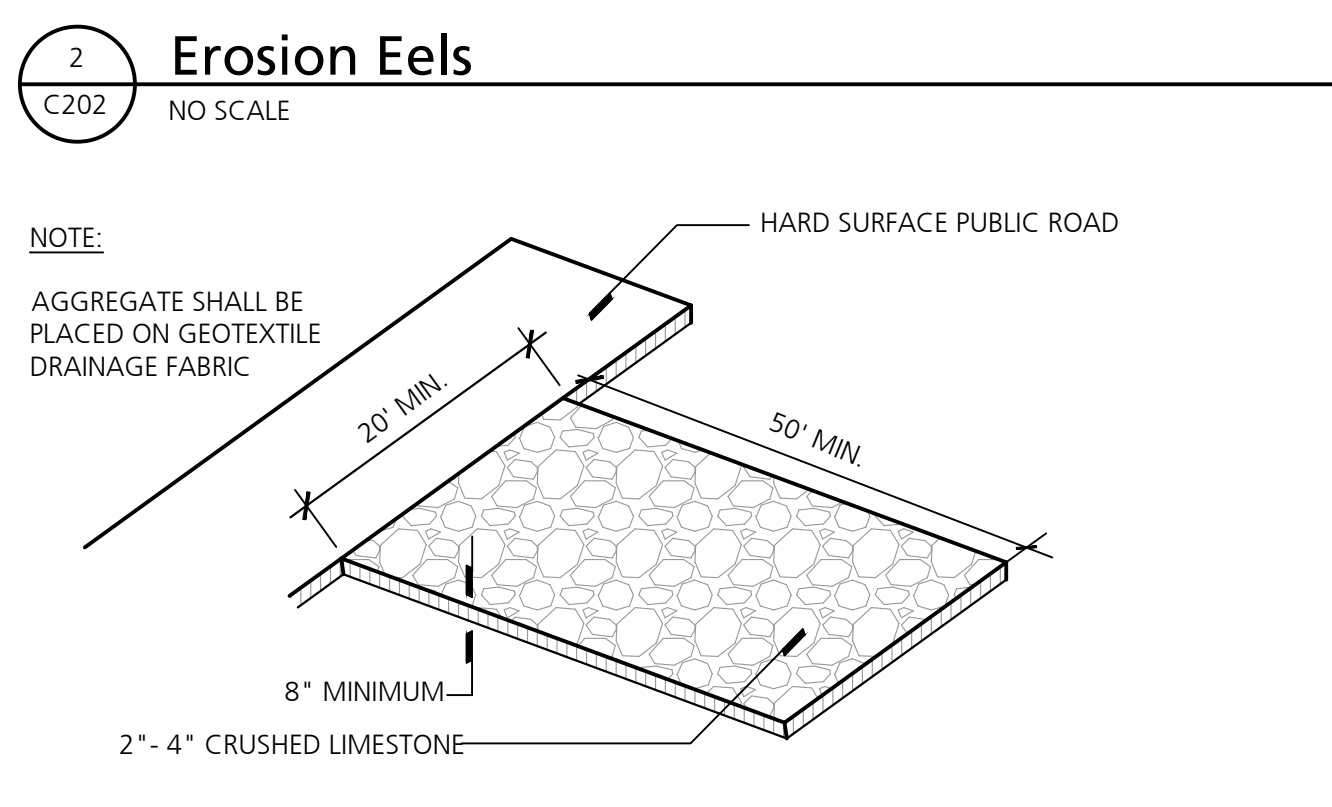
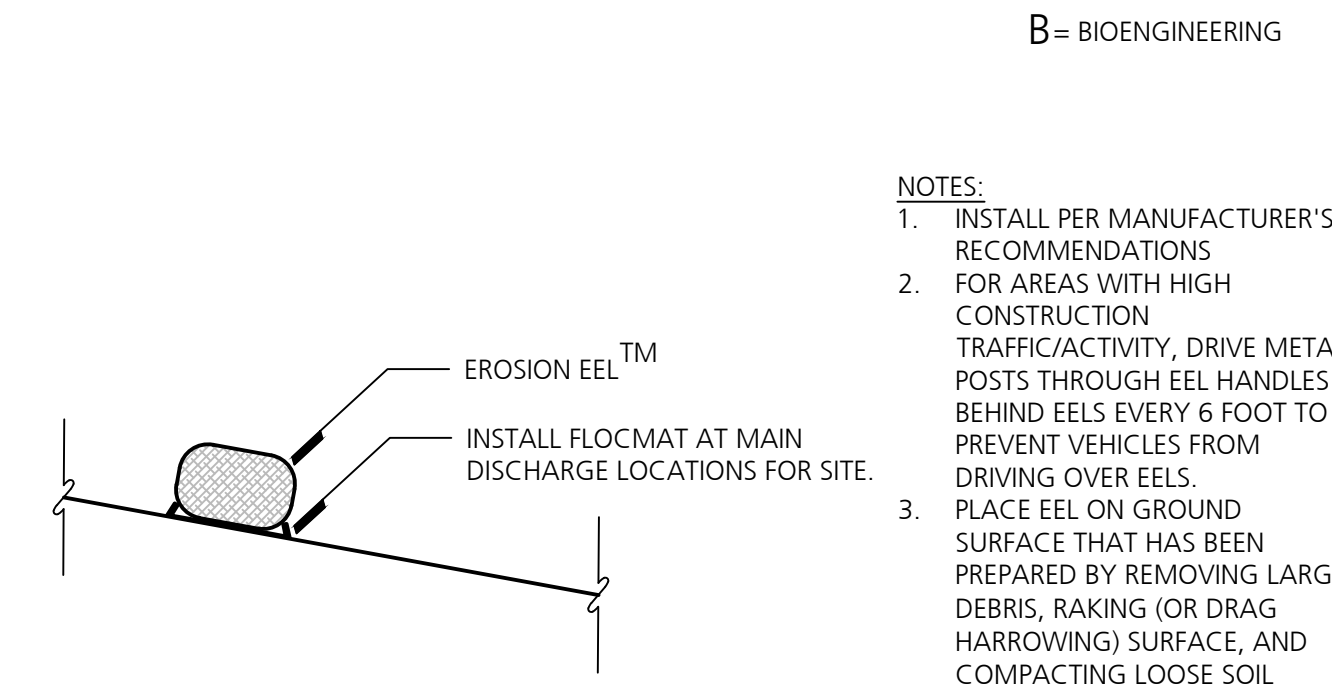
Frame P/N from Step 1	Filter Bag P/N from Step 2	Specifications for Standard Bags by Nominal Size		
		Nominal Bag Size	Solids Storage (CuFt)	Filtered Flow Rate at 50% Max (CFS)
		Small	1.6	1.2
		Medium	2.1	1.7
		Large	3.8	2.7
		XL	6.2	3.6

**INSTALLATION NOTES:**

- REMOVE GRATE
- DROP FLEXSTORM INLET FILTER ON TO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
- REPLACE GRATE

ALL PRODUCTS MANUFACTURED BY INLET & PIPE PROTECTION, INC A DIVISION OF ADS, INC. [WWW.INLETFILTERS.COM](http://WWW.INLETFILTERS.COM) (866) 287-8655 PH (630) 355-3477 FX INFO@INLETFILTERS.COM

TYPE	INLET & PIPE PROTECTION, INC. (S&P) IRL	REV
C	FLEXSTORM_CATCH_IT	A



PROJECT	STANDARD DETAILS	REVISION
CITY OF EAST LANSING DEPARTMENT OF ENGINEERING 410 ABBOTT ROAD EAST LANSING, MI 48823 (517) 337-9459 FAX (517) 337-3943	FLEXSTORM CATCH-IT INLET FILTERS	03/01/16
DATE: 02/20/14	DATE: 03/14/14	DATE: 03/14/14
DRW: CJM	CHK: RFS	APP: RFS
		SCALE: NONE
		SHEET NO: 1 OF 2

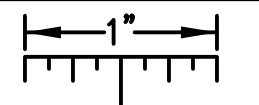
PROJECT	STANDARD DETAILS	REVISION
CITY OF EAST LANSING DEPARTMENT OF ENGINEERING 410 ABBOTT ROAD EAST LANSING, MI 48823 (517) 337-9459 FAX (517) 337-3943	FLEXSTORM CATCH-IT INLET FILTERS	03/01/16
DATE: 02/20/14	DATE: 03/14/14	DATE: 03/14/14
DRW: CJM	CHK: RFS	APP: RFS
		SCALE: NONE
		SHEET NO: 2 OF 2

1 Inlet Filter  
C202 NO SCALE

3 Stone Tracking Mat  
C202 NO SCALE

c:\Users\collin.jackson\beckett & raeder, inc\proj la - documents\msu west tm pool demo parking lot 2023\dwgs\current drawings\C201 SESC & DTI.dwg, C202 DETAILS, 3/13/2024 6:50:26 PM, Collin Jackson, AutoCAD PDF (General Documentation).pc3

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.

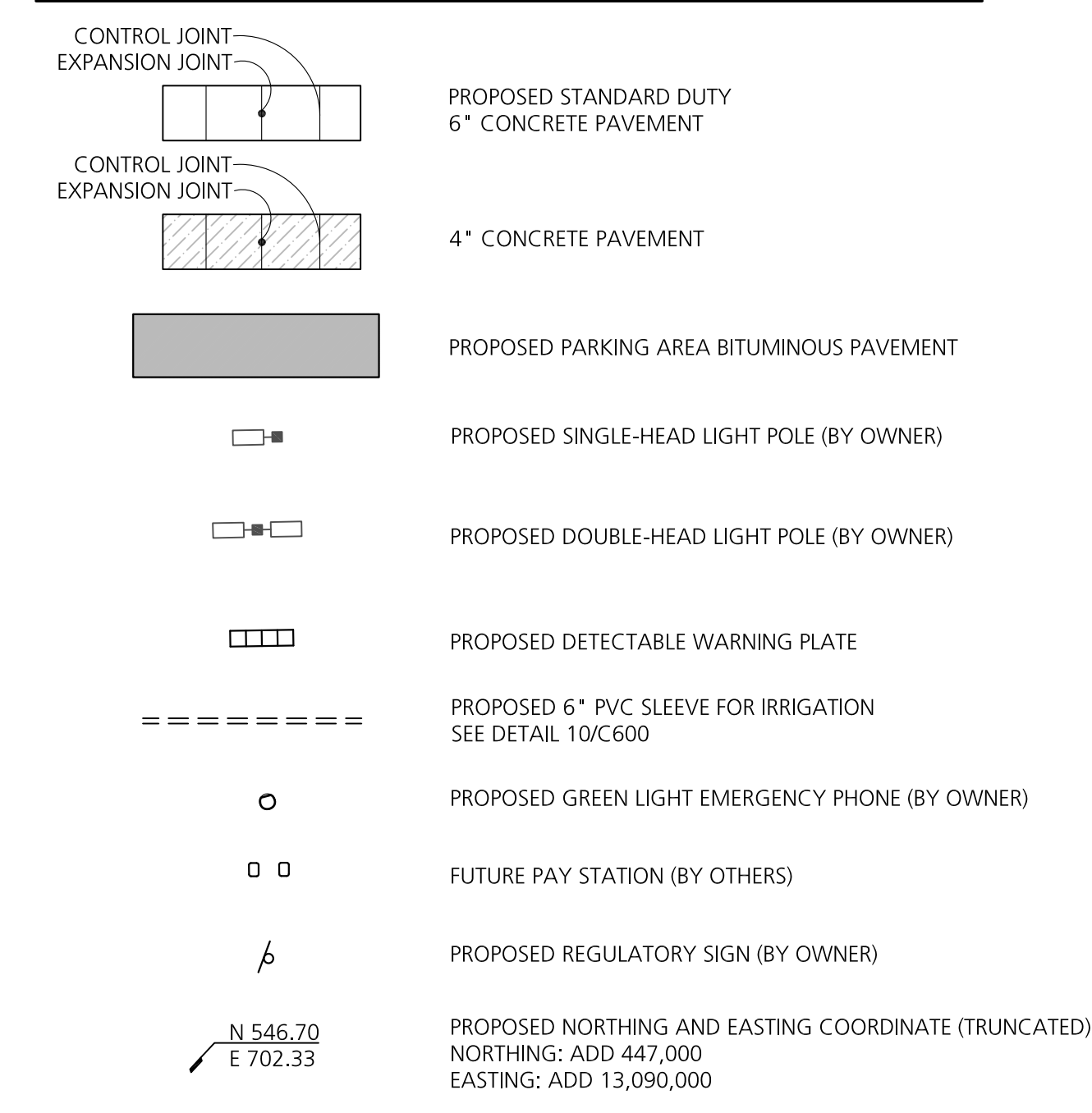


Beckett & Raeder  
 Surveyors, Architects  
 Planning, Engineering &  
 Environmental Services  
 100 West Main, Suite 101  
 East Lansing, MI 48824

Infrastructure  
 Planning and Facilities  
**MICHIGAN STATE  
 UNIVERSITY**



**LAYOUT & MATERIALS LEGEND**



**LAYOUT & MATERIALS NOTES**

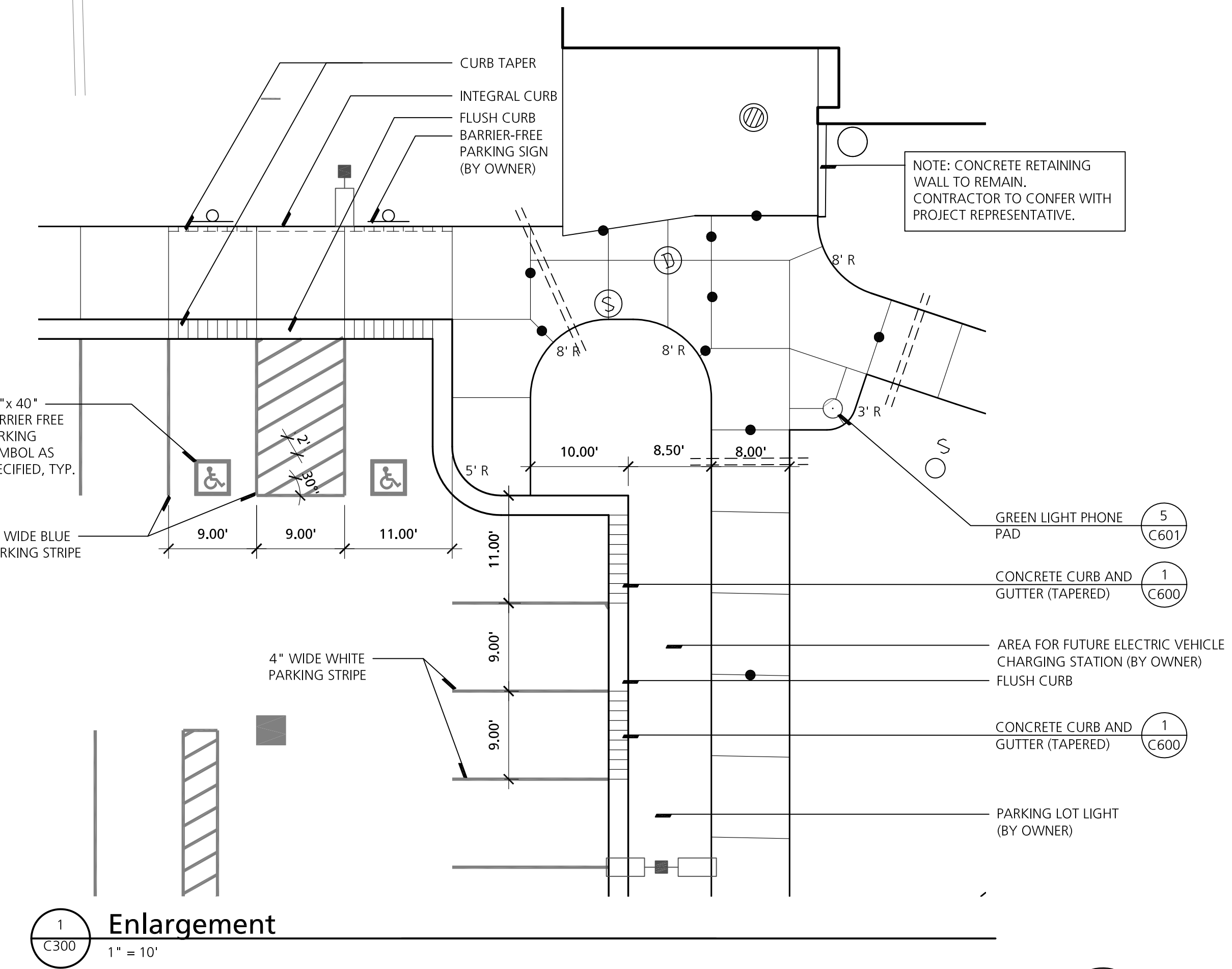
1. ALL WORK SHALL BE COMPLETED IN CONFORMANCE WITH CURRENT ADA STANDARDS.
2. ALL DIMENSIONS ARE TO BACK OF CURB, FACE OF BUILDING OR EDGE OF MATERIAL UNLESS OTHERWISE NOTED.
3. ALL WALLS, TRENCH DRAINS, PAVEMENT JOINTING, AND OTHER IMPROVEMENTS ARE PARALLEL OR PERPENDICULAR TO THE CURB PAVEMENT/ BUILDING LINE FROM WHICH THEY ARE DIMENSIONED UNLESS OTHERWISE NOTED.
4. FOLLOWING LAYOUT OF ALL MATERIALS, CONTRACTOR SHALL REVIEW WITH OWNER'S REPRESENTATIVE.
5. ANY DISCREPANCIES IN THE LAYOUT PLAN SHOULD BE IMMEDIATELY REPORTED TO OWNER'S REPRESENTATIVE.

**SPECIFICATION NOTES**

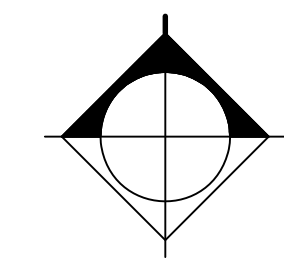
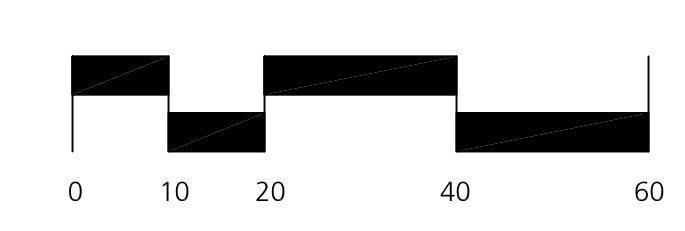
1. ALL WORK AND MATERIALS SHALL CONFORM TO MICHIGAN STATE UNIVERSITY STANDARD SPECIFICATIONS FOR CONSTRUCTION UNLESS SPECIFICALLY NOTED OR DETAILED OTHERWISE ON DRAWINGS.

**PAVEMENT JOINTING NOTES**

1. ALL NEW JOINTING SHALL ALIGN WITH EXISTING JOINTS OF ABUTTING PAVEMENT TO REMAIN.
2. IN ADDITION TO LOCATIONS NOTED ON DRAWINGS, PROVIDE EXPANSION JOINTS WHERE NEW PAVEMENT ABUTS BUILDINGS, RETAINING WALLS, AND EXISTING PAVEMENT.



1 C300  
 Enlargement  
 1" = 10'



LOT 61 SPARTAN STADIUM WEST SIDE  
 BUILD PARKING LOT

CAPITAL PROJ. NO.  
 CP23106

PRJ. MGR. A. LINEBAUGH

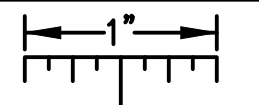
ARCH.	
MECH.	
ELEC.	G. HALSEY
CIVIL	S. LAUGHLIN
L.A.	D. WILBER
INT. DES.	
CONST. REP.	A. LINEBAUGH
APPR.	
DATE	03-13-2024
SCALE	1" = 20'
REVISIONS	
50% CD REVIEW	
95% CD REVIEW	
BIDS	

LAYOUT AND MATERIALS PLAN  
**C300**

C:\Users\collinjacobsen\beckett & raeder, inc\br\la - documents\msu west tm pool demo parking lot 2023\Drawings\current drawings\C300 L.M.dwg, C300, 3/13/2024, 7:16:51 PM, Collin Jackson, None



THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



**Beckett & Raeder**  
 Landscape Architecture  
 Planning, Design, Construction  
 1000 West 10th Street, Suite 101  
 Ann Arbor, MI 48106-1001  
 Phone: 734.769.1100  
 Fax: 734.769.1101  
 www.beckett-raeder.com



**GRADING LEGEND**

---	LIMITS OF DISTURBANCE
--- 844 ---	EXISTING MINOR CONTOUR
--- 844 ---	EXISTING MAJOR CONTOUR
---	EXISTING SPOT ELEVATION
44	PROPOSED MINOR CONTOUR (ADD 800)
45	PROPOSED MAJOR CONTOUR (ADD 800)
+45.00	PROPOSED SPOT ELEVATION (ADD 800)
+M.E.	MATCH EXISTING ELEVATION
*RIM 41.32	PROPOSED UTILITY STRUCTURE RIM ELEVATION (ADD 800)

- SPECIFICATION NOTES**
1. ALL WORK AND MATERIALS SHALL CONFORM TO MICHIGAN STATE UNIVERSITY STANDARD SPECIFICATIONS FOR CONSTRUCTION UNLESS SPECIFICALLY NOTED OR DETAILED OTHERWISE ON DRAWINGS.

- GRADING NOTES**
1. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION ALL WORK COMPLETED IN CONFORMANCE WITH CURRENT ADA STANDARDS.
  2. PROPOSED CONTOUR LINES AND SPOT ELEVATIONS REFLECT FINISH GRADES. HOLD DOWN SUBGRADE ELEVATIONS ACCORDINGLY. ADJUST RIM ELEVATIONS OF ALL UTILITIES AFFECTED BY WORK IN THIS CONTRACT. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE ON THE SITE. ANY AREA THAT APPEARS TO NOT PROPERLY DRAIN SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE LANDSCAPE ARCHITECT/ENGINEER FOR RESOLUTION.
  3. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITY LOCATIONS, DEPTHS AND ELEVATIONS PRIOR TO CONSTRUCTION. NO CHANGES IN CONTRACT PRICE WILL BE AWARDED FOR ACTUAL DISCREPANCIES IN UTILITY LOCATIONS DUE TO THE FAILURE TO VERIFY ACTUAL FIELD LOCATIONS.
  4. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY HIS CONSTRUCTION OPERATIONS TO A CONDITION EQUAL TO OR BETTER THAN THAT EXISTING PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CLEAN UP AND HAUL AWAY ALL CONSTRUCTION DEBRIS AND LITTER CAUSED BY HIS OPERATIONS.
  5. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGE INCURRED SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

**MICHIGAN STATE UNIVERSITY**  
 Infrastructure Planning and Facilities

**LOT 61-SPARTAN STADIUM-WEST SIDE BUILD PARKING LOT**

CAPITAL PROJ. NO.  
CP23106

PRJ. MGR. A. LINEBAUGH

ARCH. \_\_\_\_\_

MECH. \_\_\_\_\_

ELEC. G. HALSEY

CIVIL S. LAUGHLIN

L.A. D. WILBER

INT. DES. \_\_\_\_\_

CONST. REP. A. LINEBAUGH

APPR. \_\_\_\_\_

DATE 03-13-2024

SCALE 1" = 20'

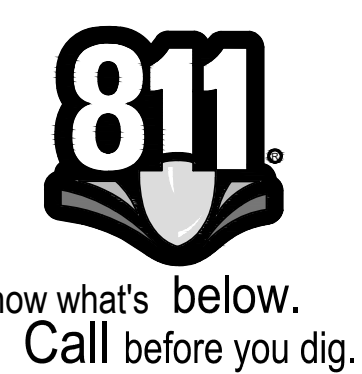
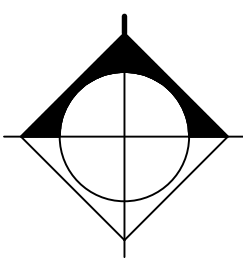
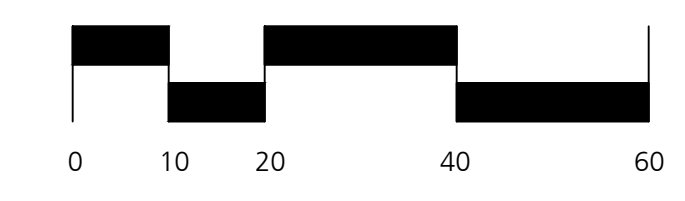
REVISIONS

50% CD REVIEW
95% CD REVIEW
BIDS

GRADING PLAN

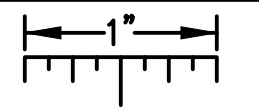
**C400**

09 OF 20



c:\Users\collin.jackson\beckett & raeder, inc\lri la - documents\msu west tm pool demo parking lot 2023\Drawings\current drawings\C400 GRADING C400\_3/13/2024 6:50:38 PM, Collin Jackson, AutoCAD PDF (General Documentation).pc3

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



**Beckett & Raeder**  
 ENGINEERS ARCHITECTS  
 1000 W. WALKER ROAD, SUITE 101  
 ANN ARBOR, MI 48106

Infrastructure  
 Planning and Facilities

**MICHIGAN STATE UNIVERSITY**

LOT 61-SPARTAN STADIUM-WEST SIDE  
 BUILD PARKING LOT

CAPITAL PROJ. NO.  
 CP23106

PRJ. MGR. A. LINEBAUGH  
 ARCH. \_\_\_\_\_  
 MECH. \_\_\_\_\_  
 ELEC. G. HALSEY  
 CIVIL S. LAUGHLIN  
 L.A. D. WILBER

INT. DES. \_\_\_\_\_  
 CONST. REP. A. LINEBAUGH  
 APPR. \_\_\_\_\_  
 DATE 03-13-2024  
 SCALE 1" = 20'

REVISIONS  
 50% CD REVIEW \_\_\_\_\_  
 95% CD REVIEW \_\_\_\_\_  
 BIDS \_\_\_\_\_

UTILITIES PLAN

C500

**UTILITIES LEGEND**

- PROPOSED STORM CATCH BASIN
- PROPOSED STORM MANHOLE
- STR— PROPOSED STORM PIPE

**SPECIFICATION NOTES**

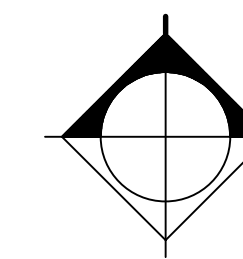
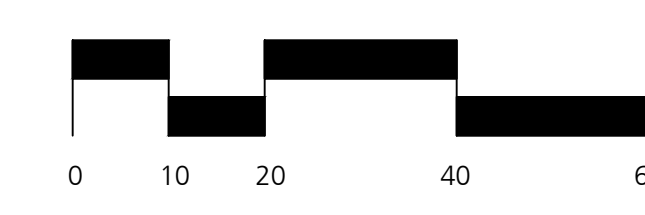
1. ALL WORK AND MATERIALS SHALL CONFORM TO MICHIGAN STATE UNIVERSITY STANDARD SPECIFICATIONS FOR CONSTRUCTION UNLESS SPECIFICALLY NOTED OR DETAILED OTHERWISE ON DRAWINGS.

**UTILITIES NOTES**

1. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION ALL WORK COMPLETED IN CONFORMANCE WITH CURRENT ADA STANDARDS.
2. PROPOSED CONTOUR LINES AND SPOT ELEVATIONS REFLECT FINISH GRADES. HOLD DOWN SUBGRADE ELEVATIONS ACCORDINGLY. ADJUST RIM ELEVATIONS OF ALL UTILITIES AFFECTED BY WORK IN THIS CONTRACT. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE ON THE SITE. ANY AREA THAT APPEARS TO NOT PROPERLY DRAIN SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE LANDSCAPE ARCHITECT/ENGINEER FOR RESOLUTION.
3. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITY LOCATIONS, DEPTHS AND ELEVATIONS PRIOR TO CONSTRUCTION. NO CHANGES IN CONTRACT PRICE WILL BE AWARDED FOR ACTUAL DISCREPANCIES IN UTILITY LOCATIONS DUE TO THE FAILURE TO VERIFY ACTUAL FIELD LOCATIONS.
4. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY HIS CONSTRUCTION OPERATIONS TO A CONDITION EQUAL TO OR BETTER THAN THAT EXISTING PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CLEAN UP AND HAUL AWAY ALL CONSTRUCTION DEBRIS AND LITTER CAUSED BY HIS OPERATIONS.
5. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGE INCURRED SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
6. ALL UTILITY CROSSINGS SHALL HAVE A MINIMUM OF 18" VERTICAL CLEARANCE.

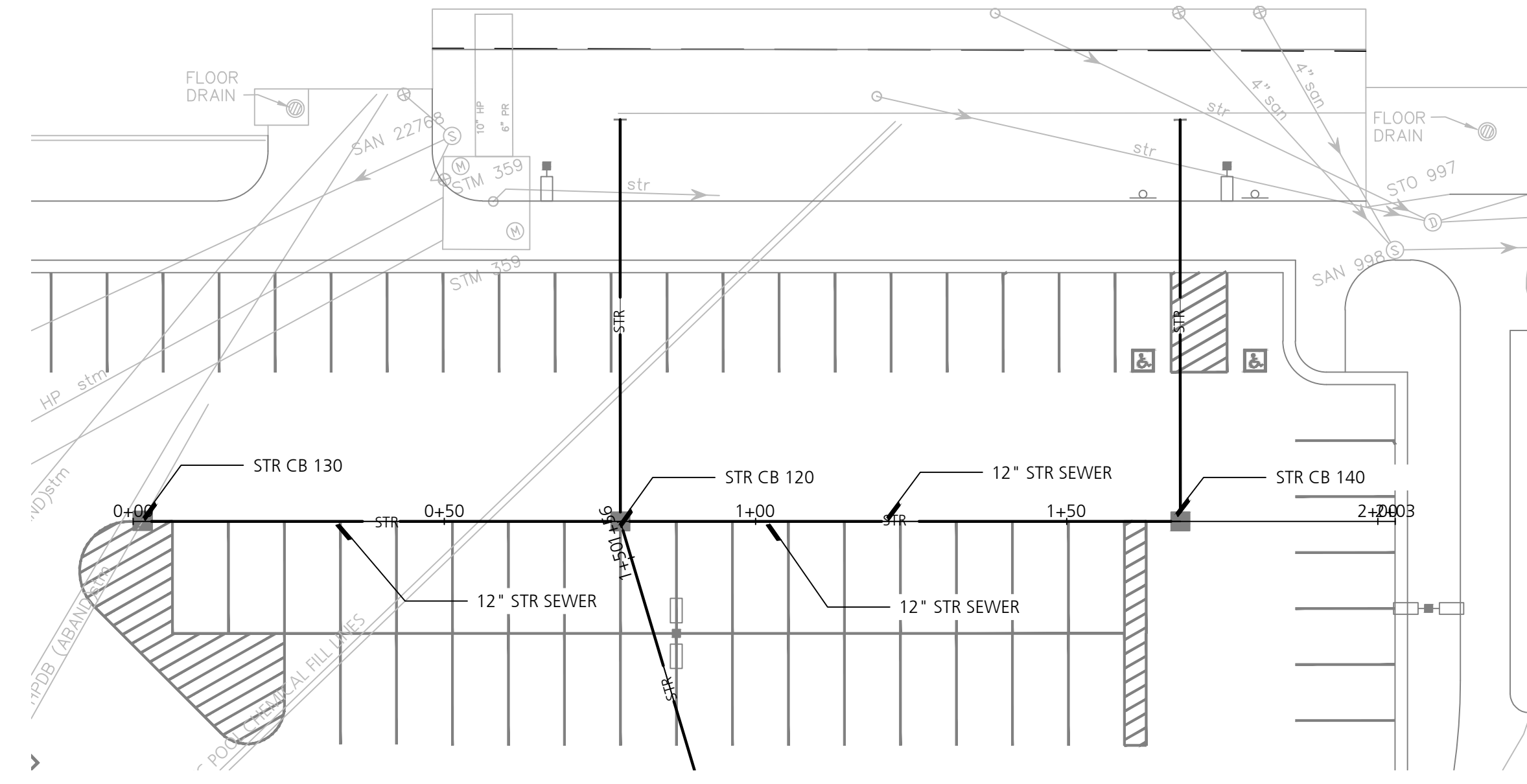
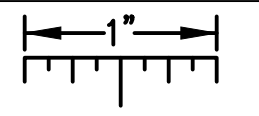
STORM SEWER STRUCTURE TABLE

STRUCTURE ID	TYPE	CASTING	RIM ELEV.	INVERT ELEVATIONS
MH100	48" DIA MANHOLE	EJW 1140 - TYPE B	841.40	INV 12" NW 835.00 INV 12" SW 834.00
SQU 110	48" DIA SQU	MANUFACTURER	841.31	INV 12" N 835.24 INV 12" SE 835.24
CB 120	48" DIA CATCH BASIN	EJW 1040 - M1	840.00	INV 12" W 835.67 INV 12" E 835.67 INV 12" N 835.67 INV 12" S 835.57
CB 130	48" DIA CATCH BASIN	EJW 1040 - M1	840.50	INV 12" 836.44
CB 140	48" DIA CATCH BASIN	EJW 1040 - M1	840.00	INV 12" W 836.12 INV 12" N 836.22

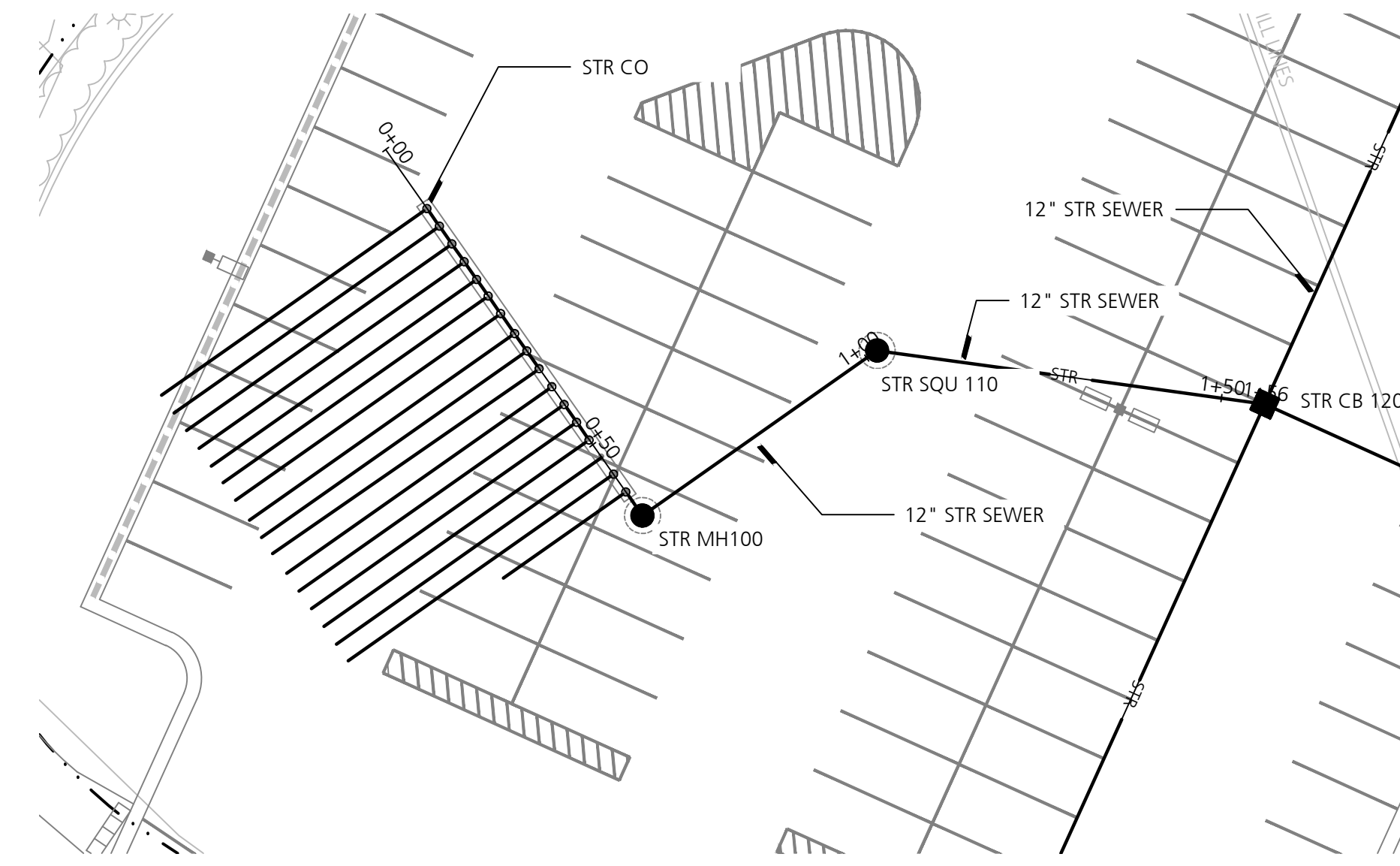


C:\Users\Cottin\Documents\Beckett & Raeder, Inc\BRI LA - Documents\MSU West IM Pool Demo Parking Lot\_2023\Drawings\Current Drawings\C500 UT Planning\_C500\_3/13/2024\_7:07:53 PM\_Cottin Jackson\_Note

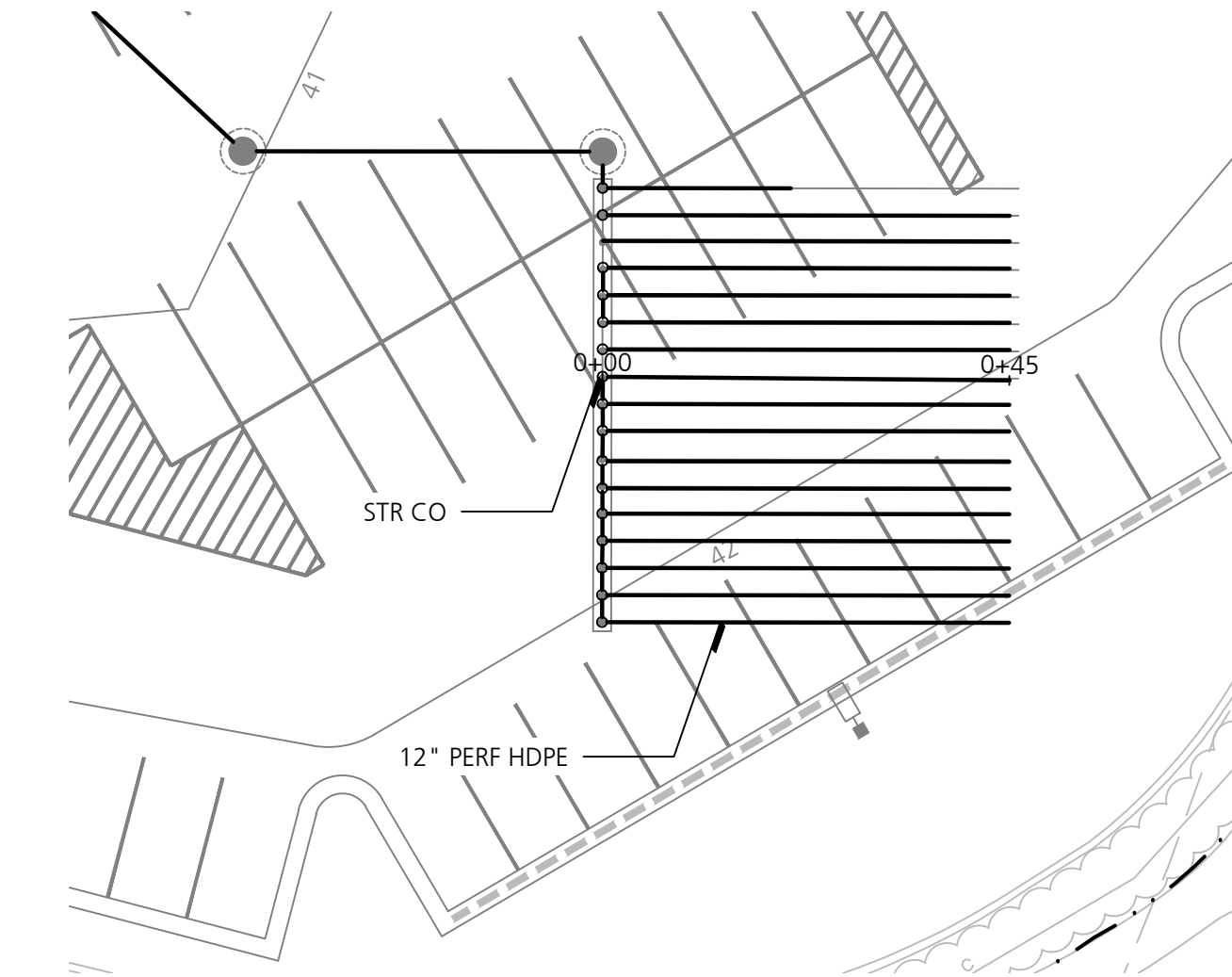
THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



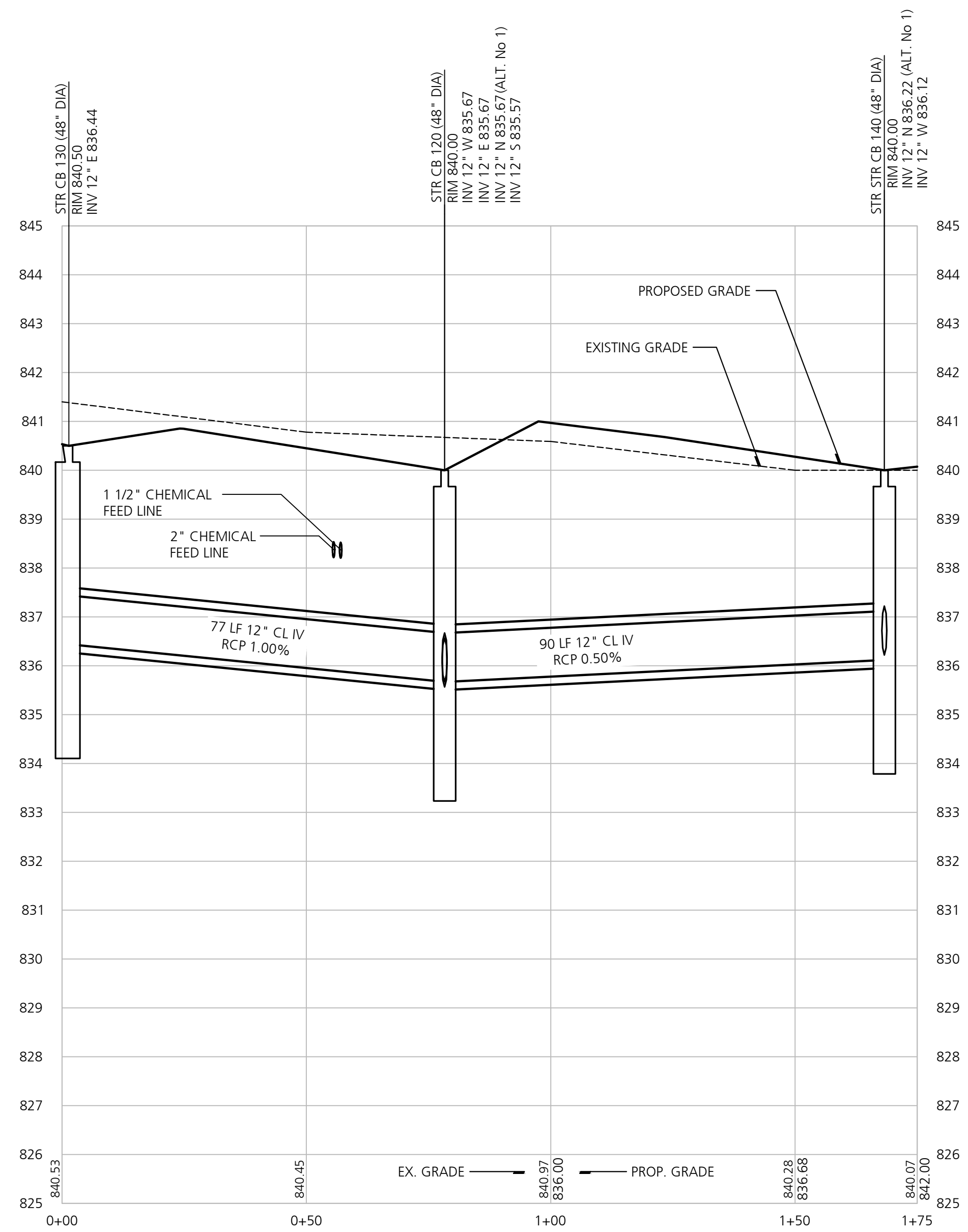
1 STORM PLAN STA 0+00 TO 1+75  
 SCALE: 1" = 20'



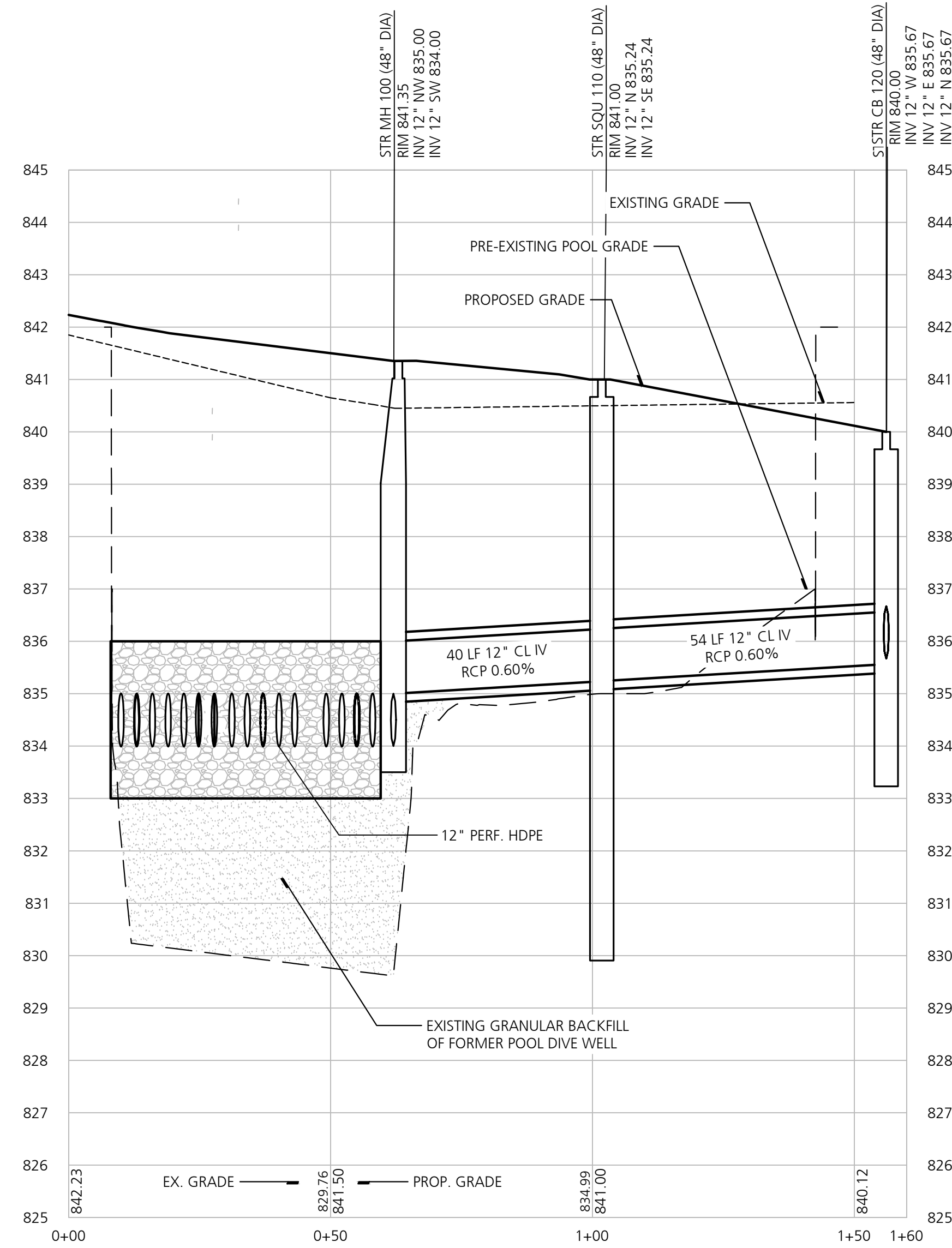
3 INF TRENCHES PLAN STA 0+00 TO 1+50  
 SCALE: 1" = 20'



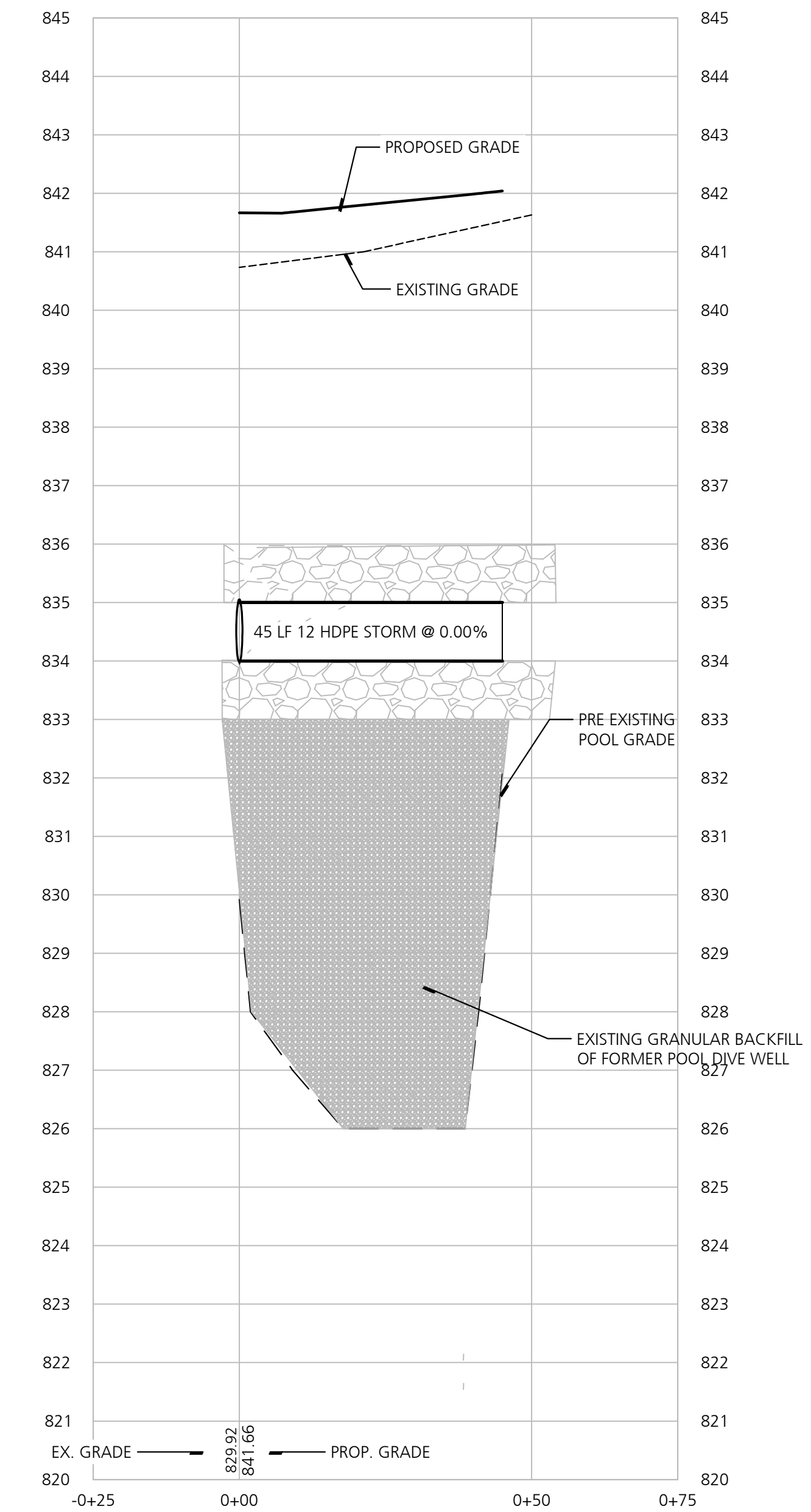
5 INF SYSTEM PLAN STA 0+00 TO 0+75  
 SCALE: 1" = 20'



3 STORM PROFILE STA 0+00 TO 1+75  
 SCALE: 1" = 30'



4 INF TRENCHES PROFILE STA 0+00 TO 1+50  
 SCALE: 1" = 20'



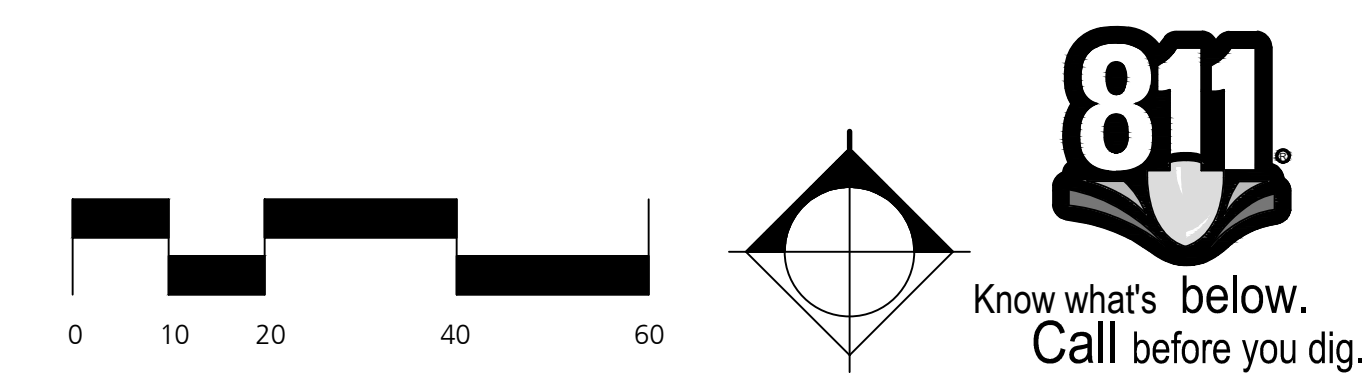
6 INF SYSTEM PROFILE STA 0+00 TO 0+75  
 SCALE: 1" = 20'

**LOT 61-SPARTAN STADIUM-WEST SIDE BUILD PARKING LOT**

CAPITAL PROJ. NO. CP23106  
 PRJ. MGR. A. LINEBAUGH  
 ARCH. \_\_\_\_\_  
 MECH. \_\_\_\_\_  
 ELEC. G. HALSEY  
 CIVIL S. LAUGHLIN  
 L.A. D. WILBER  
 INT. DES. \_\_\_\_\_  
 CONST. REP. A. LINEBAUGH  
 APPR. \_\_\_\_\_  
 DATE 03-13-2024  
 SCALE 1" = 20'  
 REVISIONS  
 50% CD REVIEW  
 95% CD REVIEW  
 BIDS

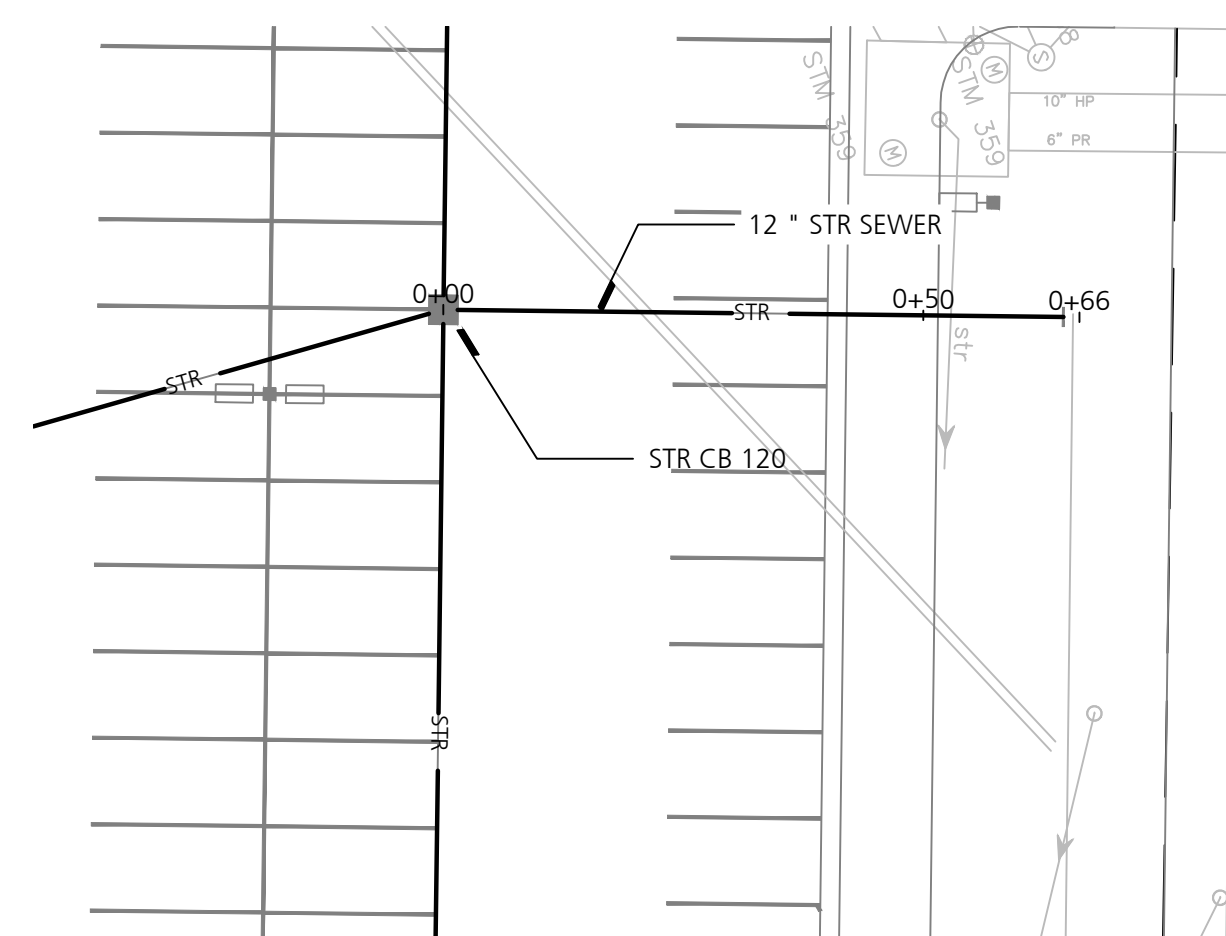
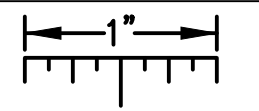
STORM PROFILES

**C510**

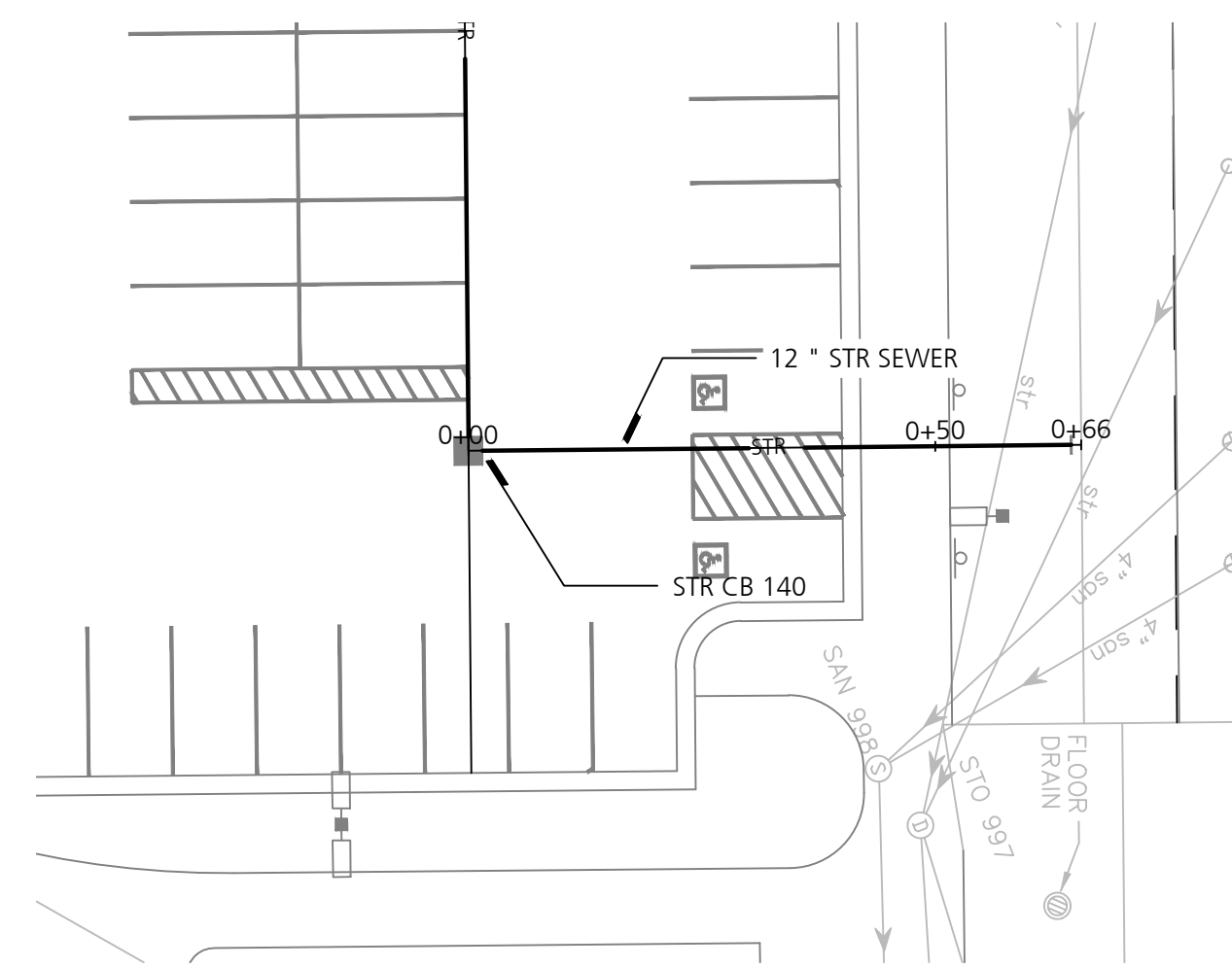


C:\Users\collinjac@msu.edu\Documents\msu west tm pool demo parking lot 2023\Drawings\current drawings\C510 UT Proj.dwg, C500, 3/13/2024 7:10:00 PM, Collin Jackson, None

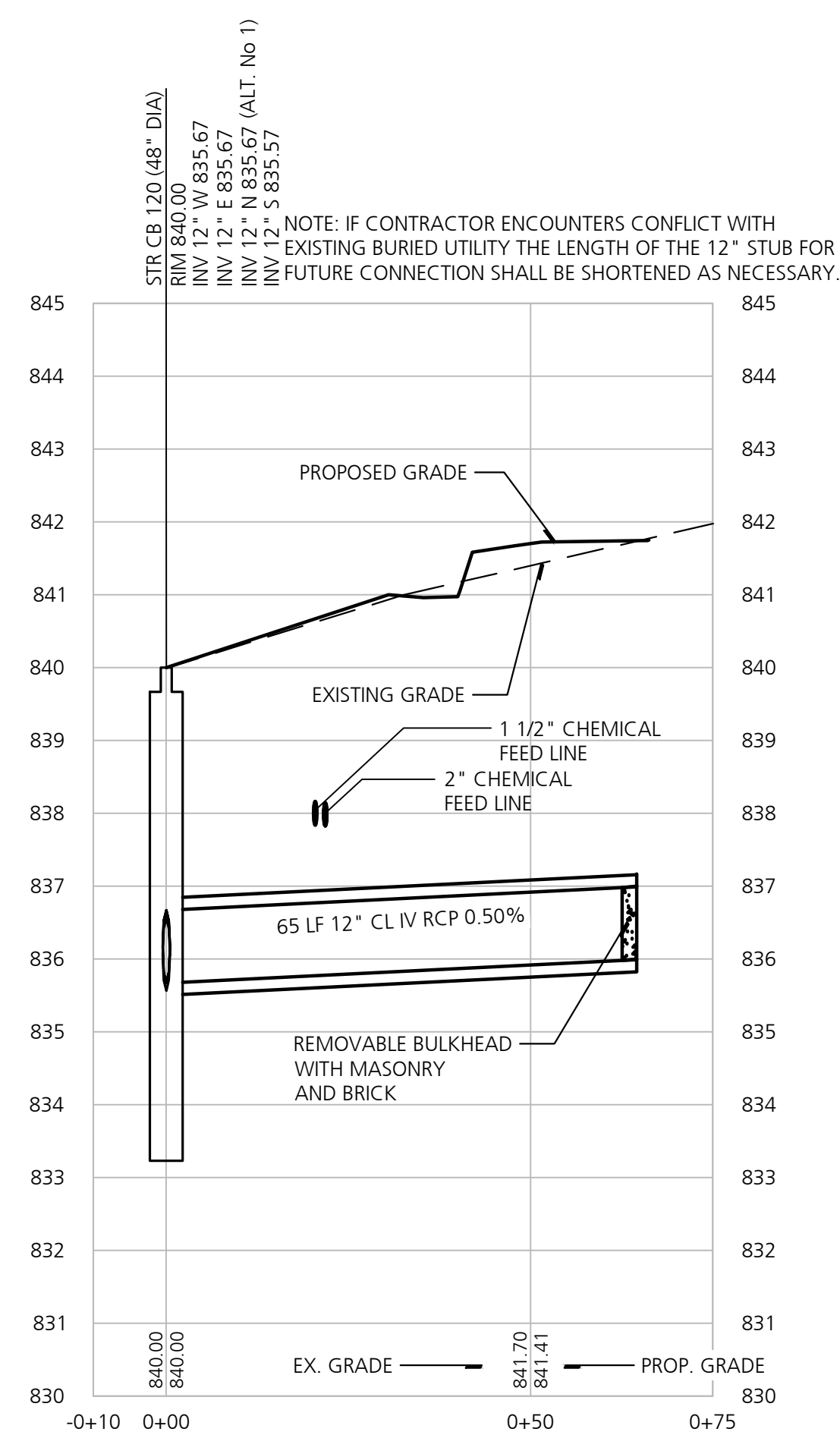
THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



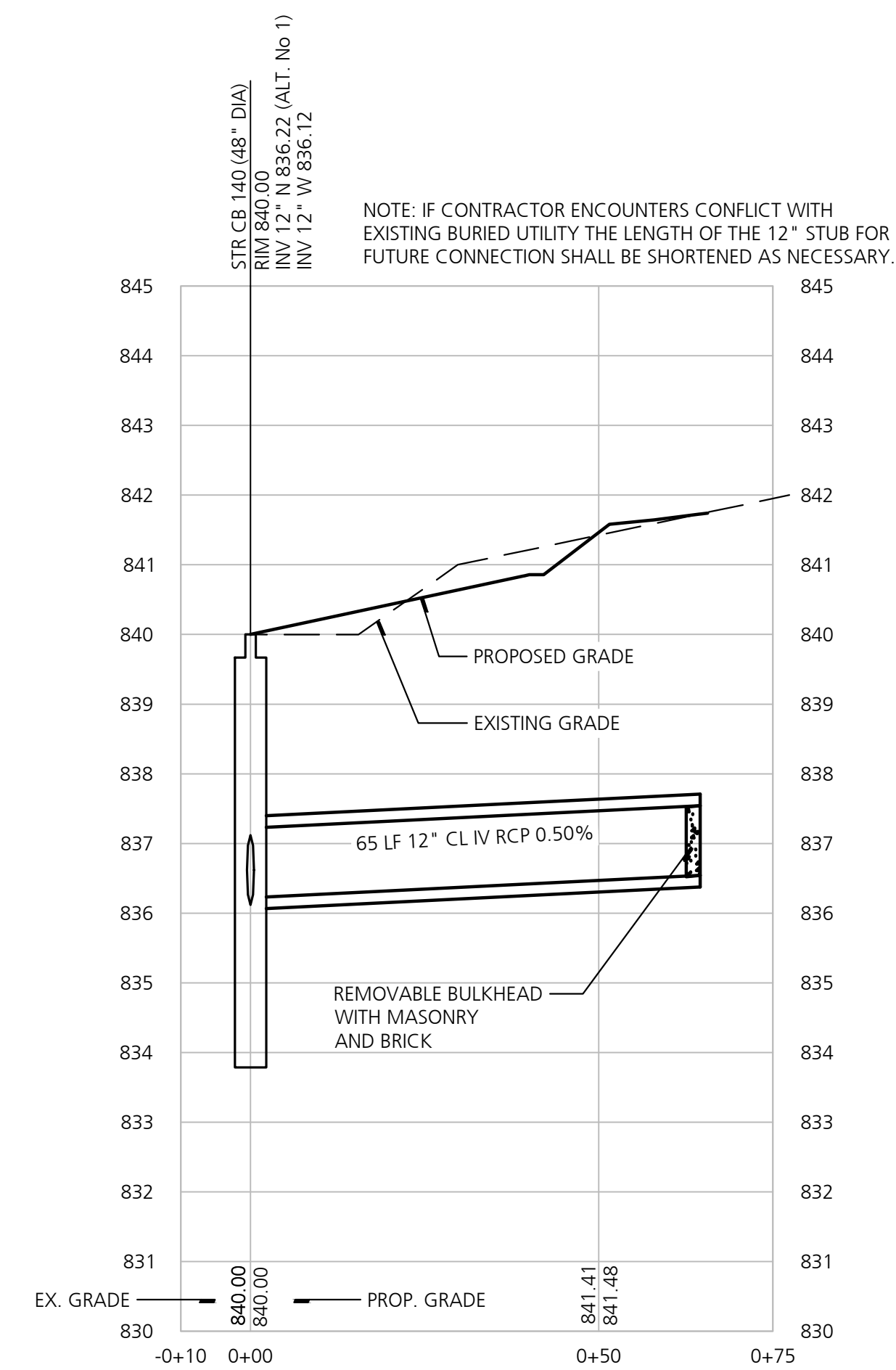
1 FUTURE EXPANSION 1 PLAN STA 0+00 TO 0+75 (ALT NO. 1)  
 SCALE: 1" = 20'



2 FUTURE EXPANSION 2 PLAN STA 0+00 TO 0+75 (Alt No. 1)  
 SCALE: 1" = 20'



3 FUTURE EXPANSION 1 PROFILE STA 0+00 TO 0+75 (ALT NO. 1)  
 SCALE: 1" = 30'



4 FUTURE EXPANSION 2 PROFILE STA 0+00 TO 0+75 (ALT NO. 1)  
 SCALE: 1" = 20'

LOT 61-SPARTAN STADIUM-WEST SIDE BUILD PARKING LOT

CAPITAL PROJ. NO. CP23106

PRJ. MGR. A. LINEBAUGH

ARCH. \_\_\_\_\_

MECH. \_\_\_\_\_

ELEC. G. HALSEY

CIVIL S. LAUGHLIN

L.A. D. WILBER

INT. DES. \_\_\_\_\_

CONST. REP. A. LINEBAUGH

APPR. \_\_\_\_\_

DATE 03-13-2024

SCALE 1" = 20'

REVISIONS

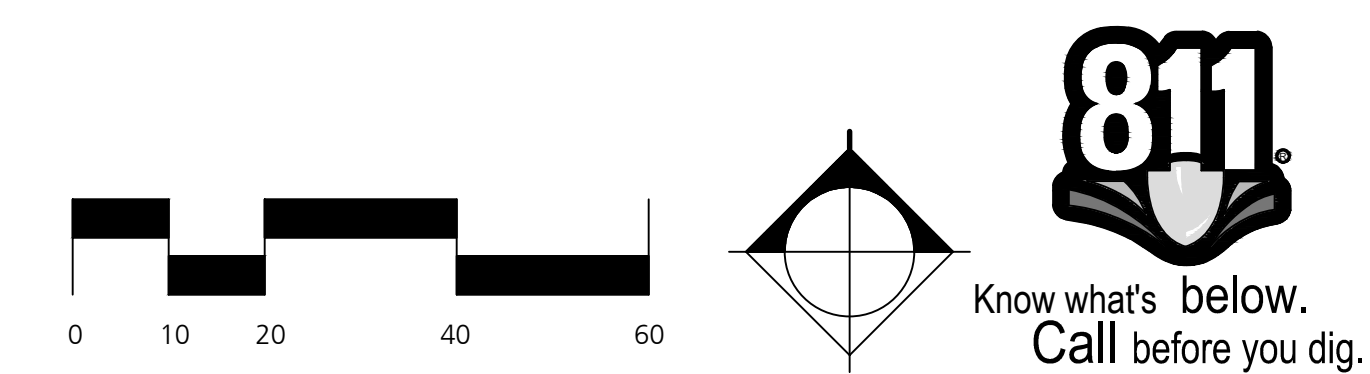
50% CD REVIEW \_\_\_\_\_

95% CD REVIEW \_\_\_\_\_

BIDS \_\_\_\_\_

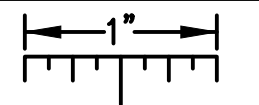
STORM PROFILES

C511

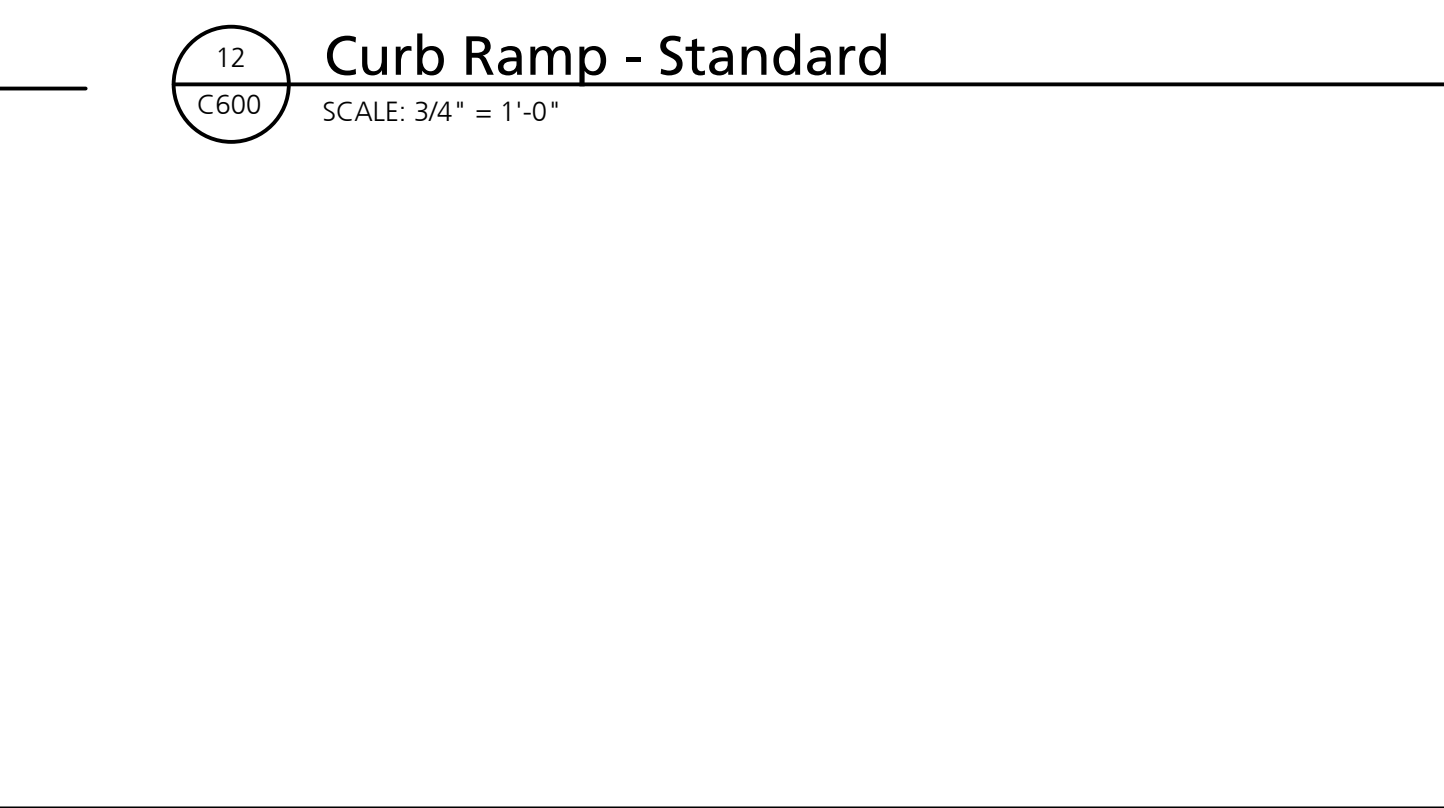
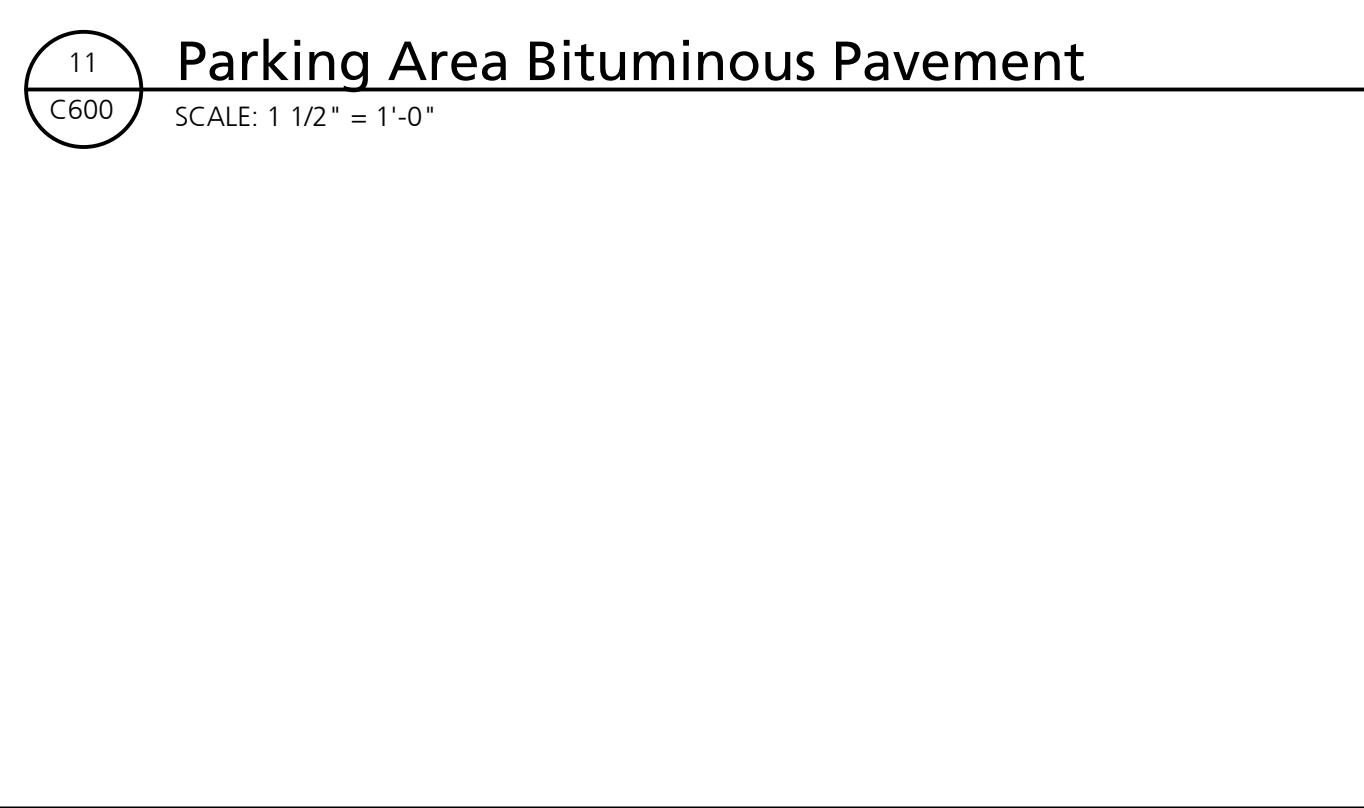
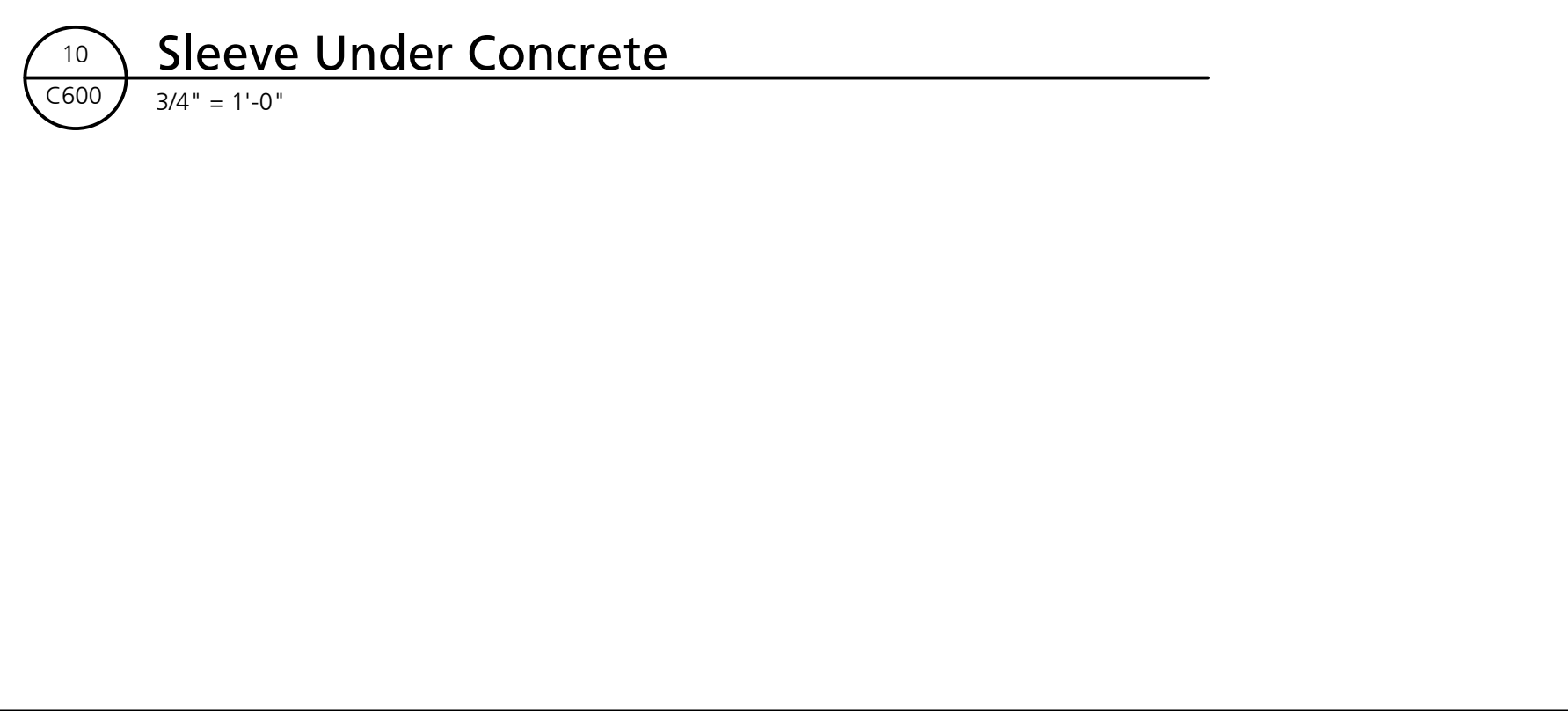
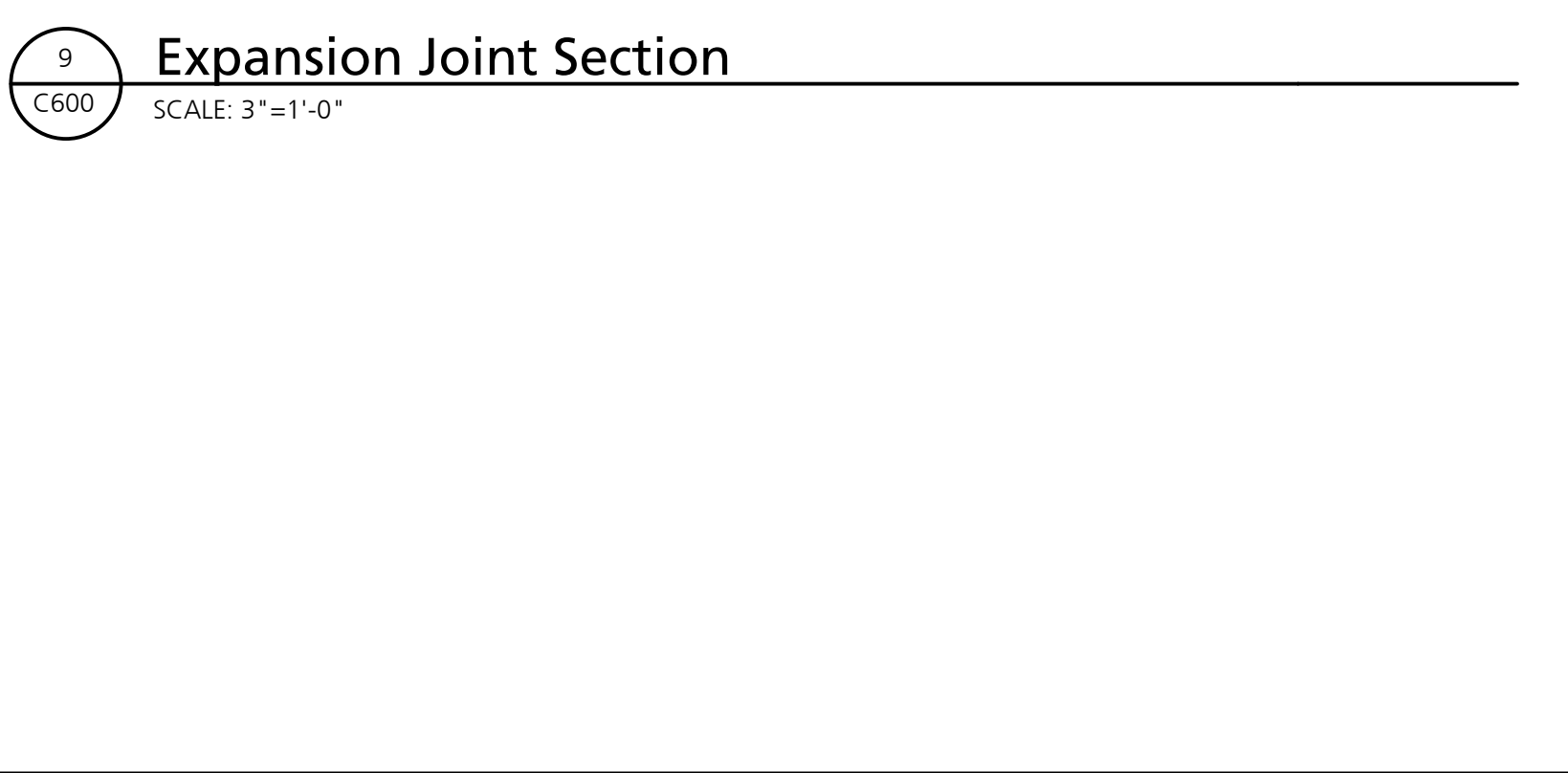
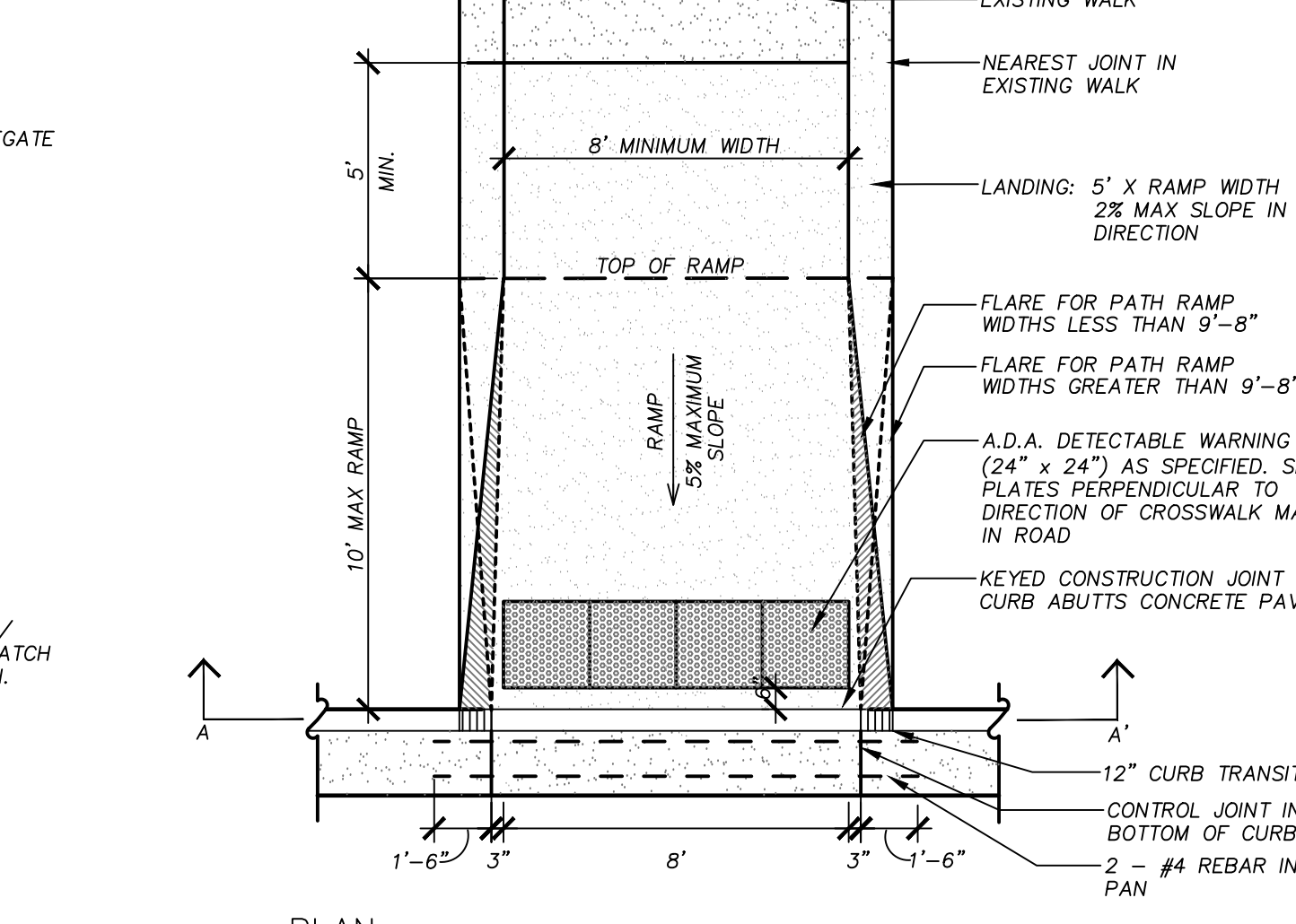
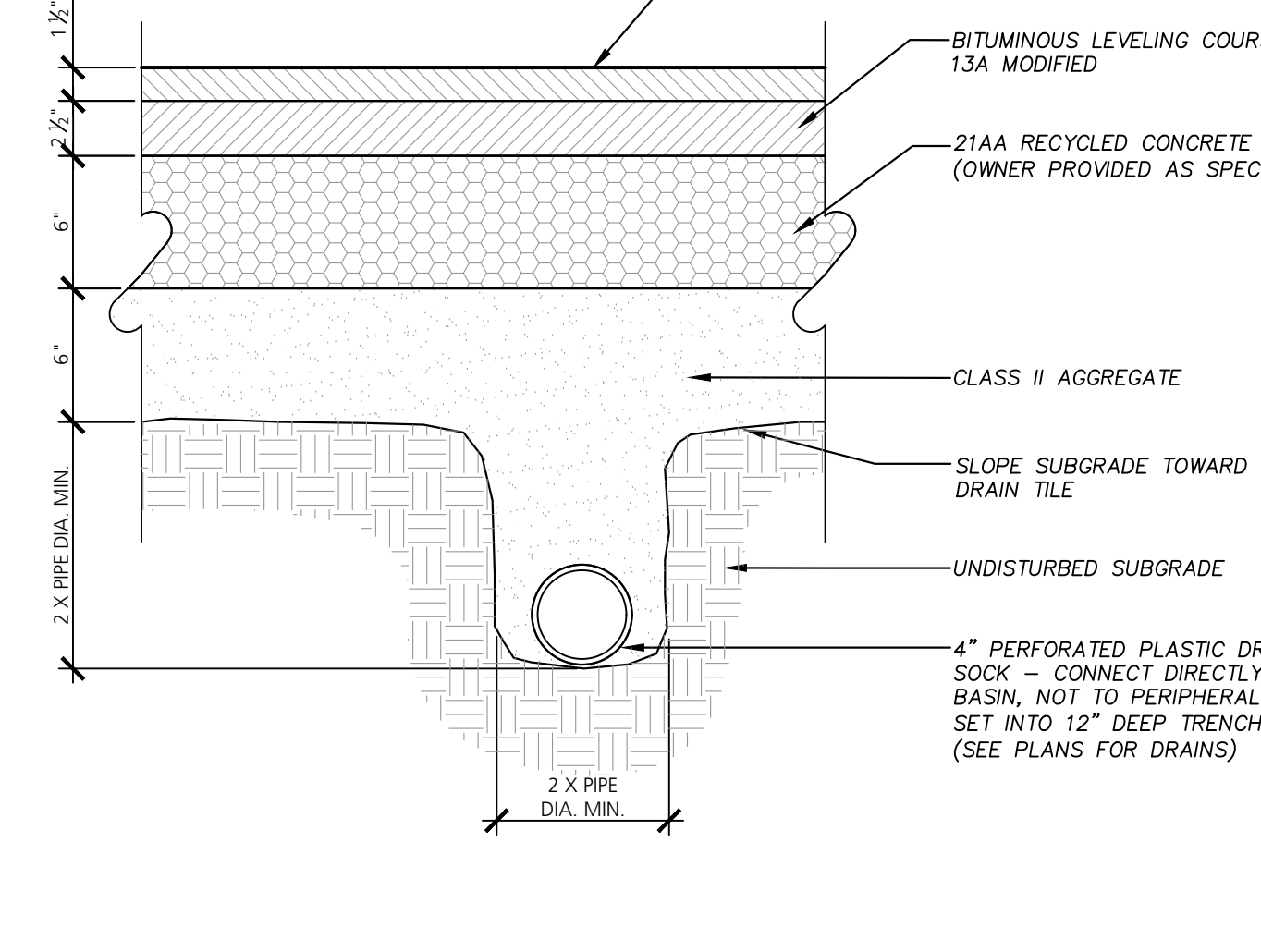
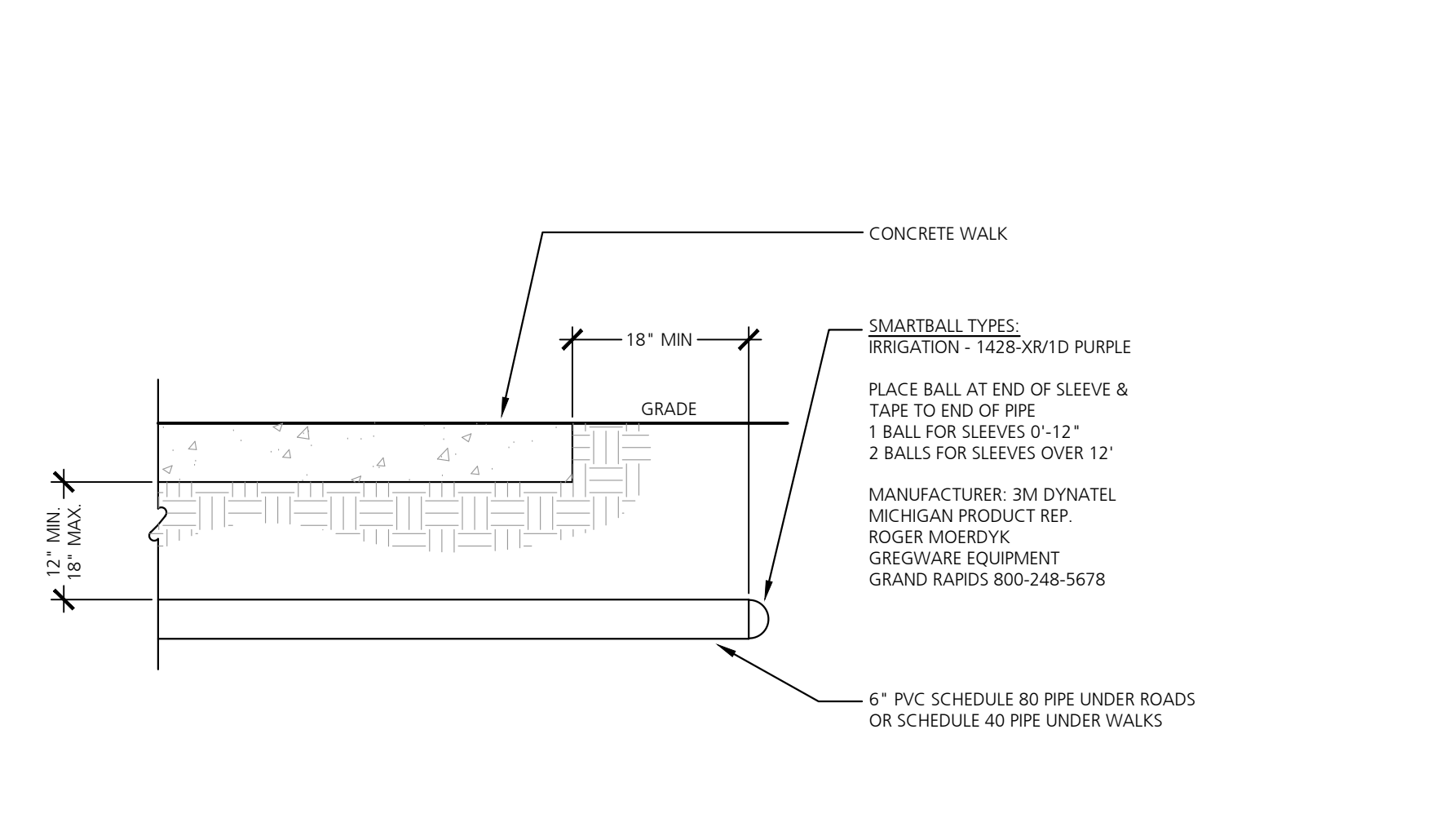
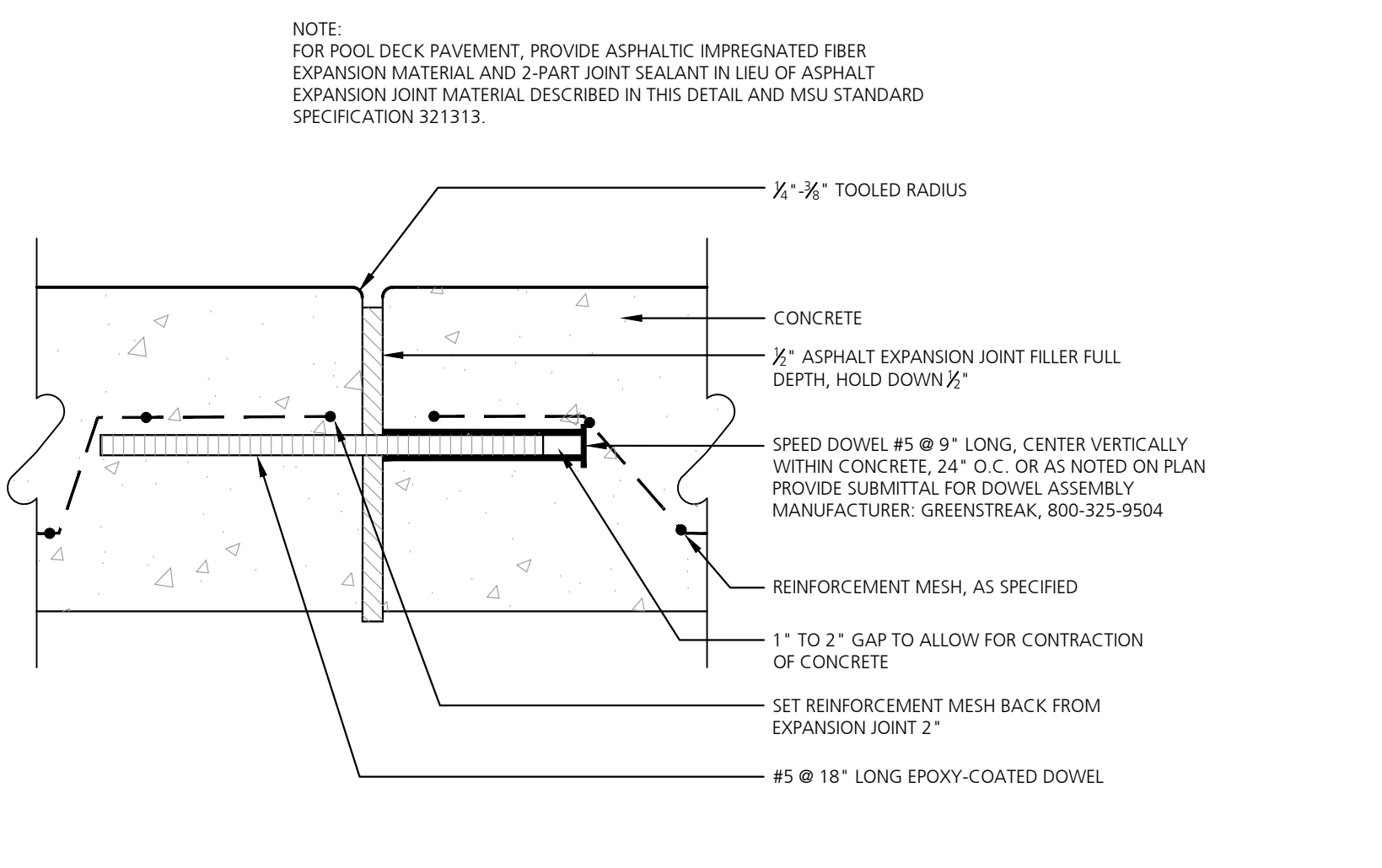
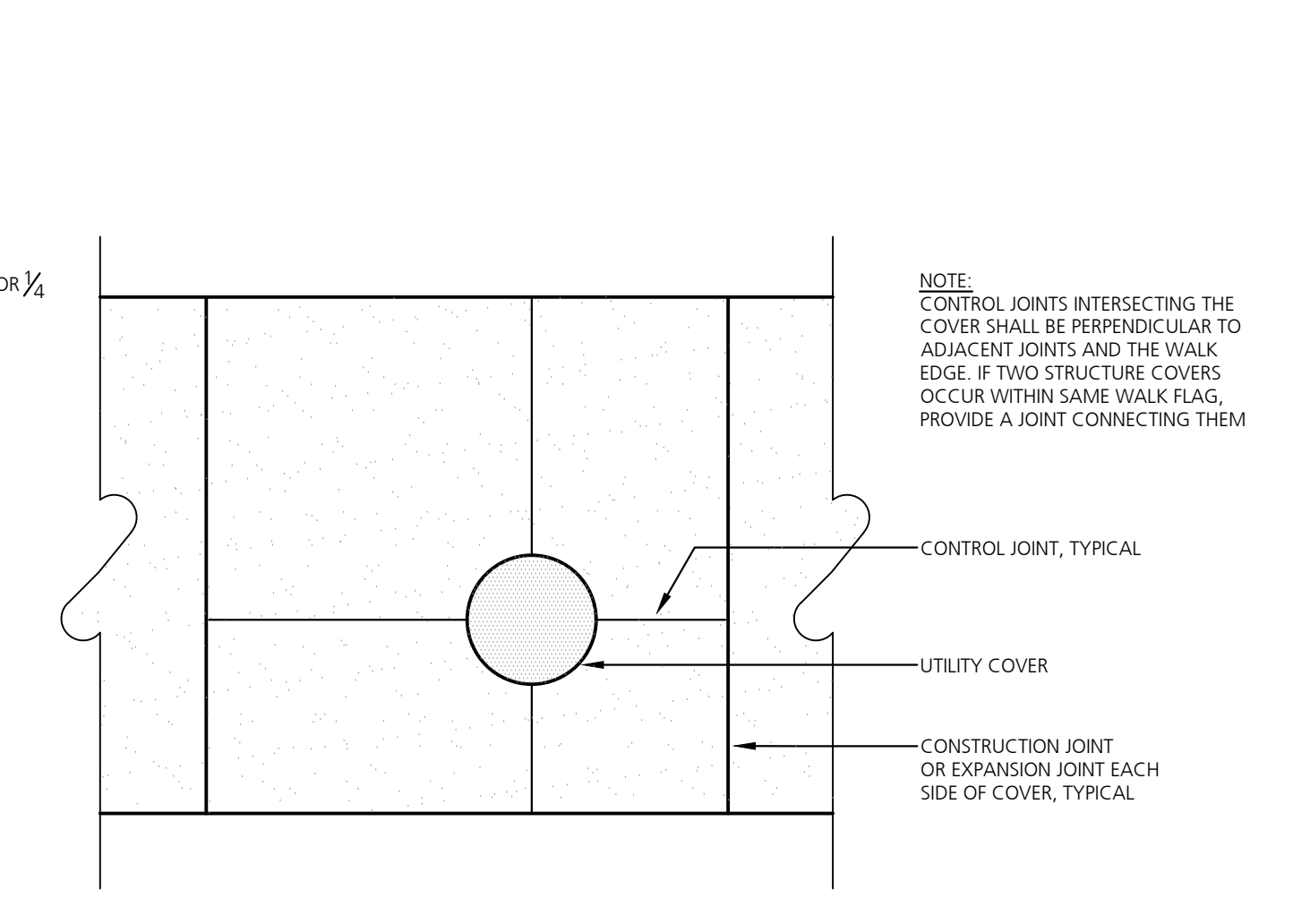
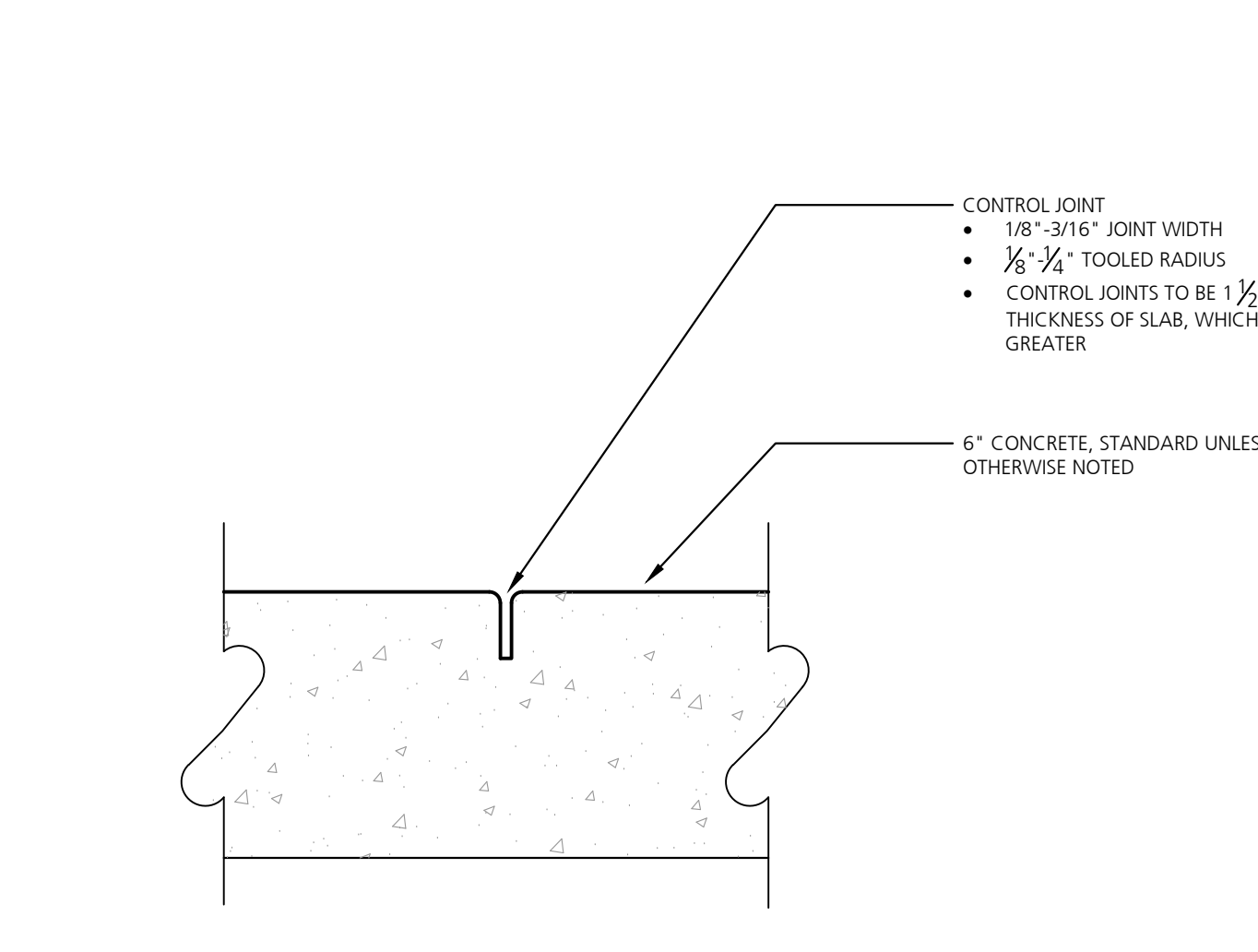
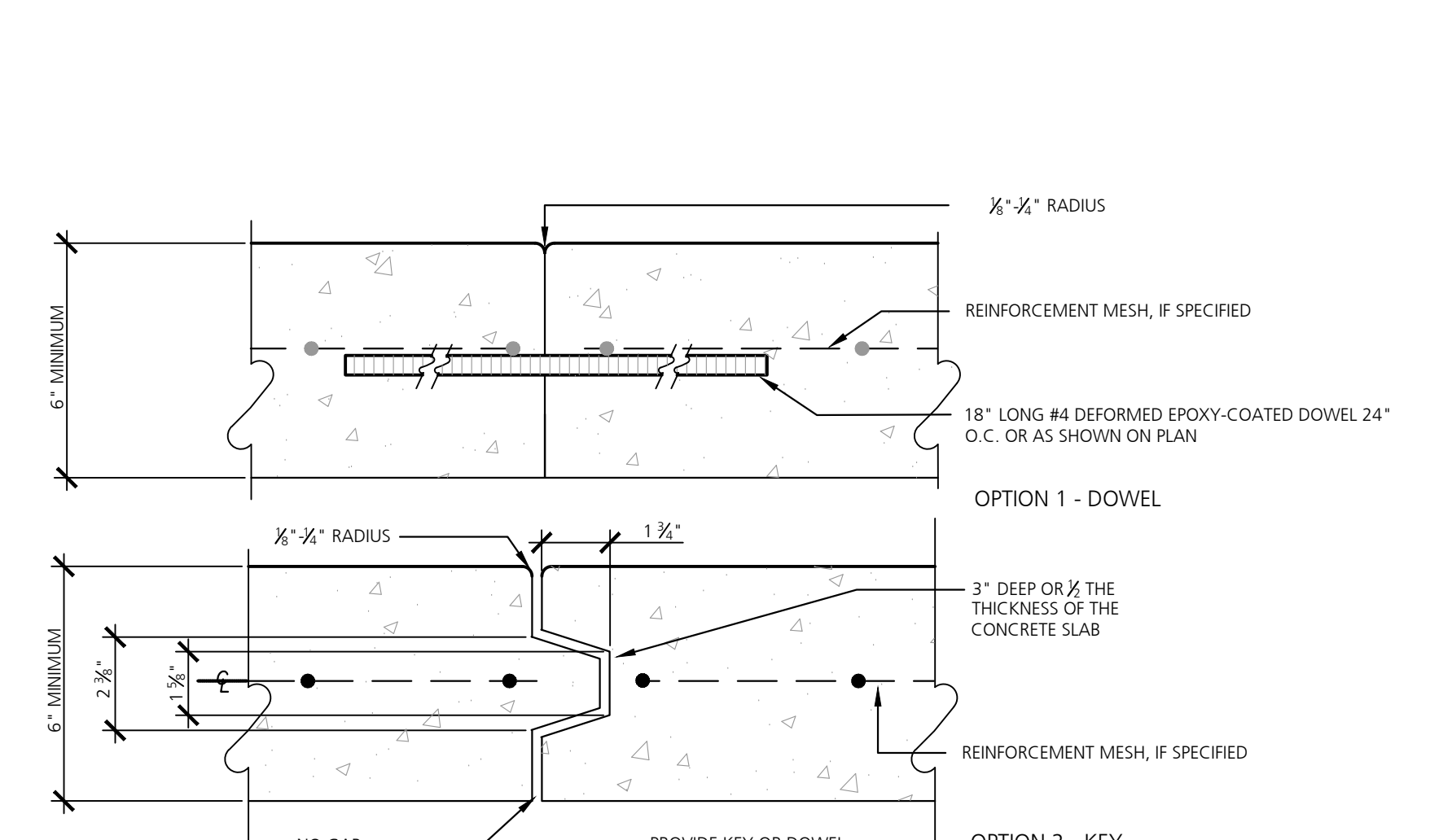
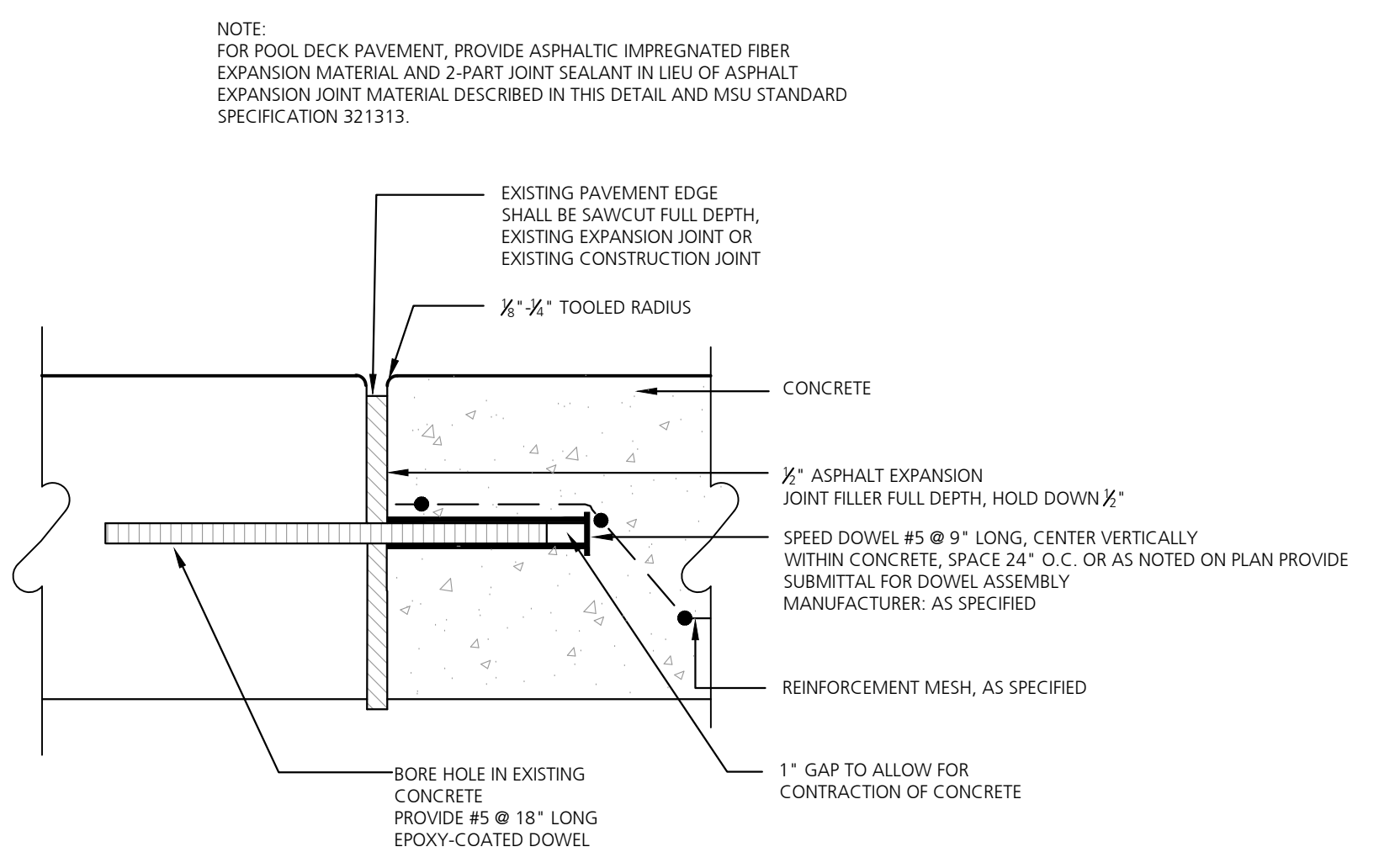
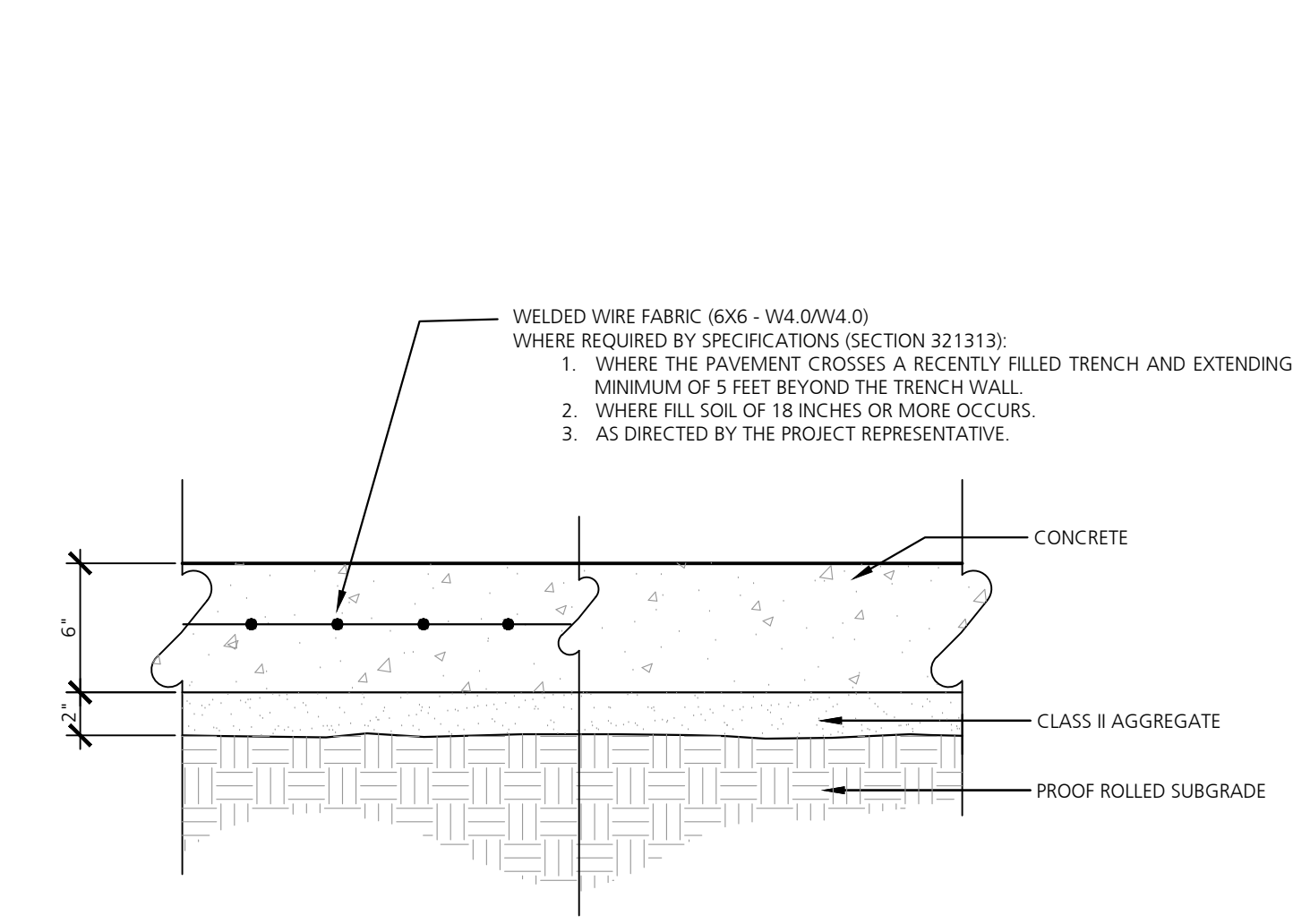
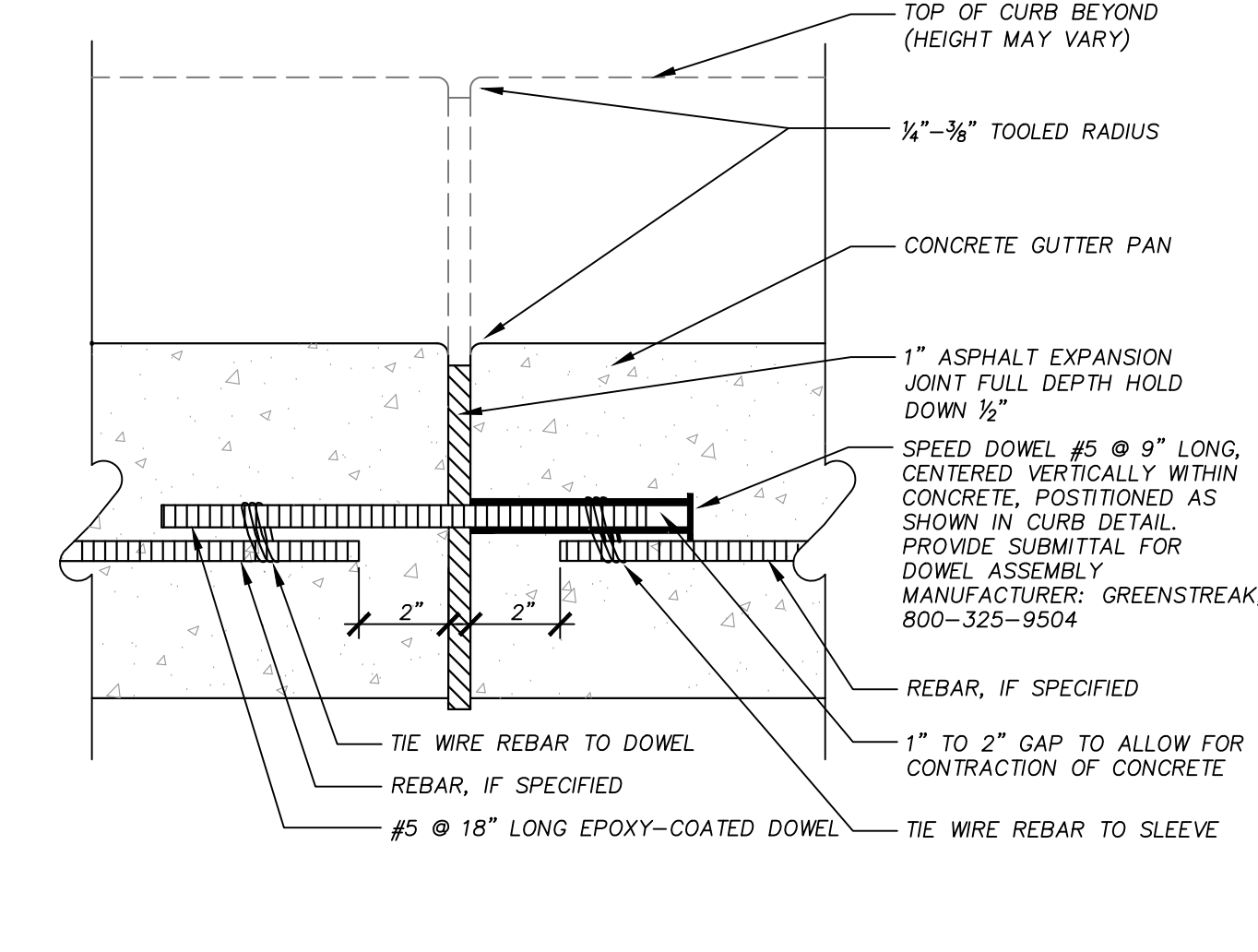
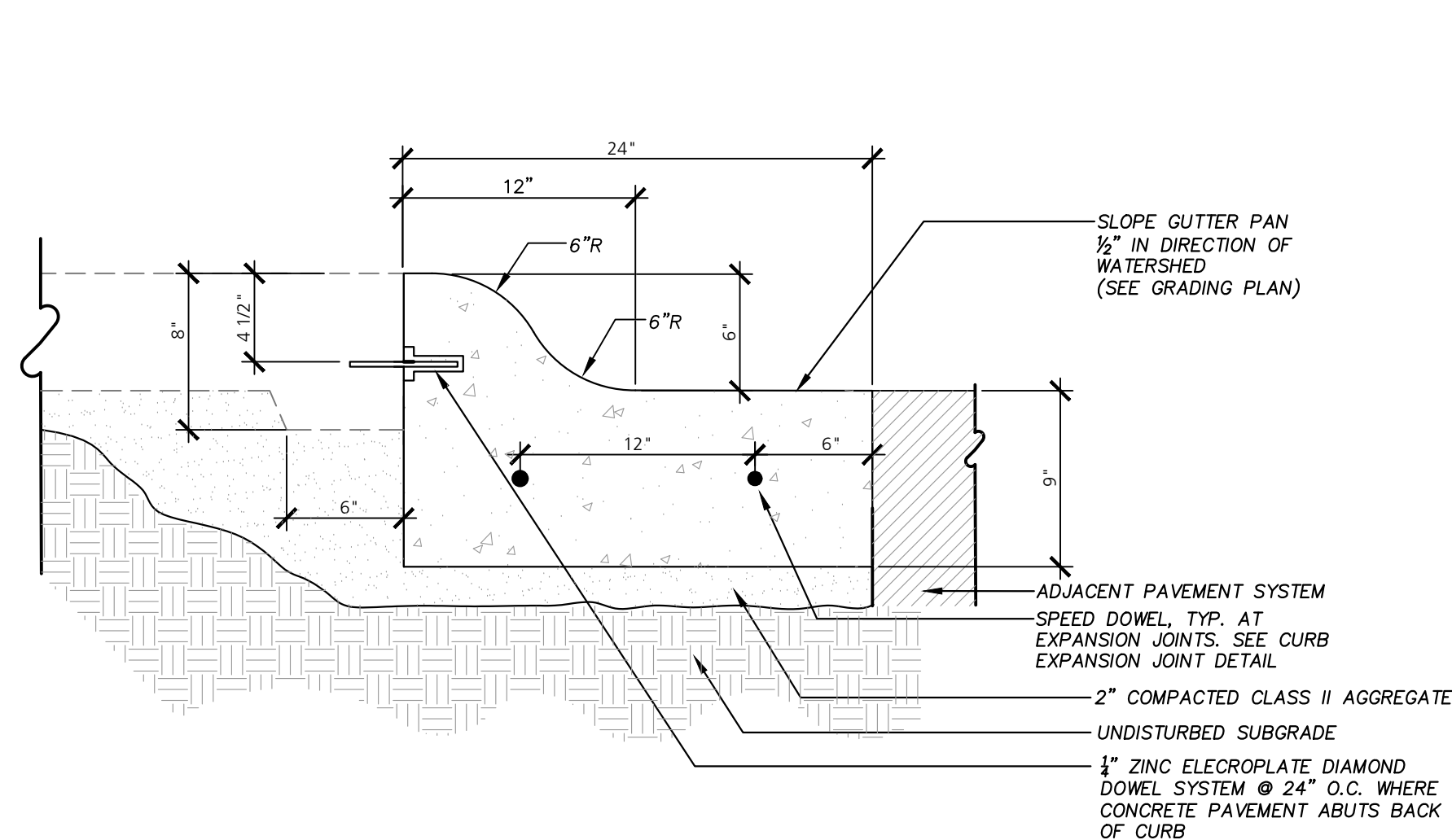
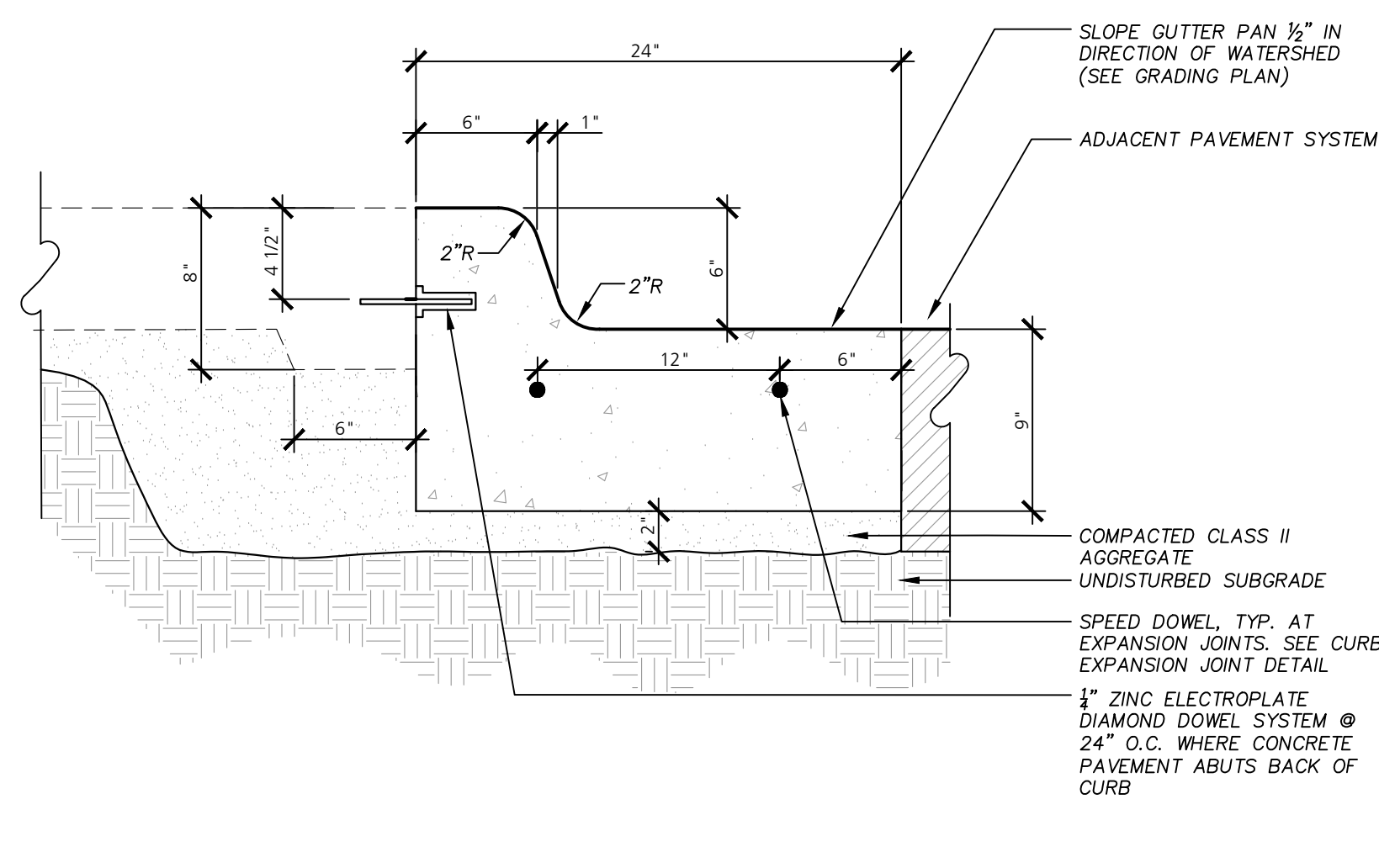


C:\Users\collinjackson\beckett & raeder, inc\br\la - documents\msu west tm pool demo parking lot 2023\Drawings\current drawings\C510 UT Proj.dwg, CS01, 3/13/2024 7:09:39 PM, Collin Jackson, None

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.

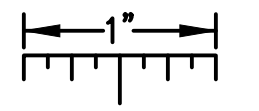


PRJ. MGR.	A. LINEBAUGH
ARCH.	
MECH.	G. HALSEY
ELEC.	S. LAUGHLIN
CIVIL	D. WILBER
L.A.	
INT. DES.	
CONST. REP.	A. LINEBAUGH
APPR.	
DATE	03-13-2024
SCALE	As Shown
REVISIONS	
50% CD REVIEW	
95% CD REVIEW	
BIDS	



c:\Users\collin.jackson\beckett & raeder, inc\lri la - documents\msu west tm pool demo parking lot 2023\Drawings\current drawings\C600 SITE DTL.dwg, C600, 3/13/2024 6:51:23 PM, Collin Jackson, AutoCAD

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



CAPITAL PROJ. NO.  
 CP23106

PRJ. MGR. A. LINEBAUGH

ARCH. \_\_\_\_\_

MECH. \_\_\_\_\_

ELEC. G. HALSEY

CIVIL S. LAUGHLIN

L.A. D. WILBER

INT. DES. \_\_\_\_\_

CONST. REP. A. LINEBAUGH

APPR. \_\_\_\_\_

DATE 03-13-2024

SCALE As Shown

REVISIONS

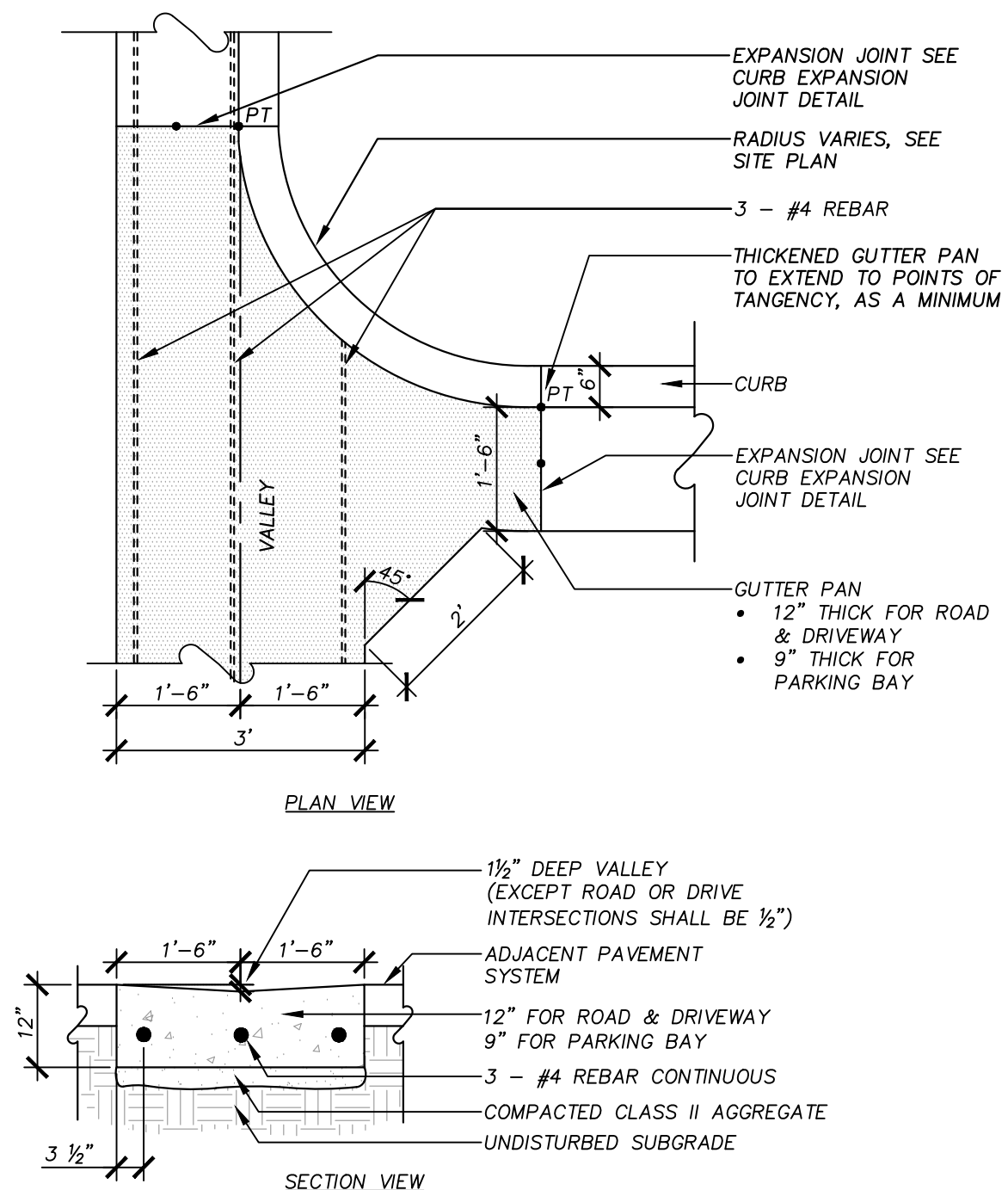
50% CD REVIEW \_\_\_\_\_

95% CD REVIEW \_\_\_\_\_

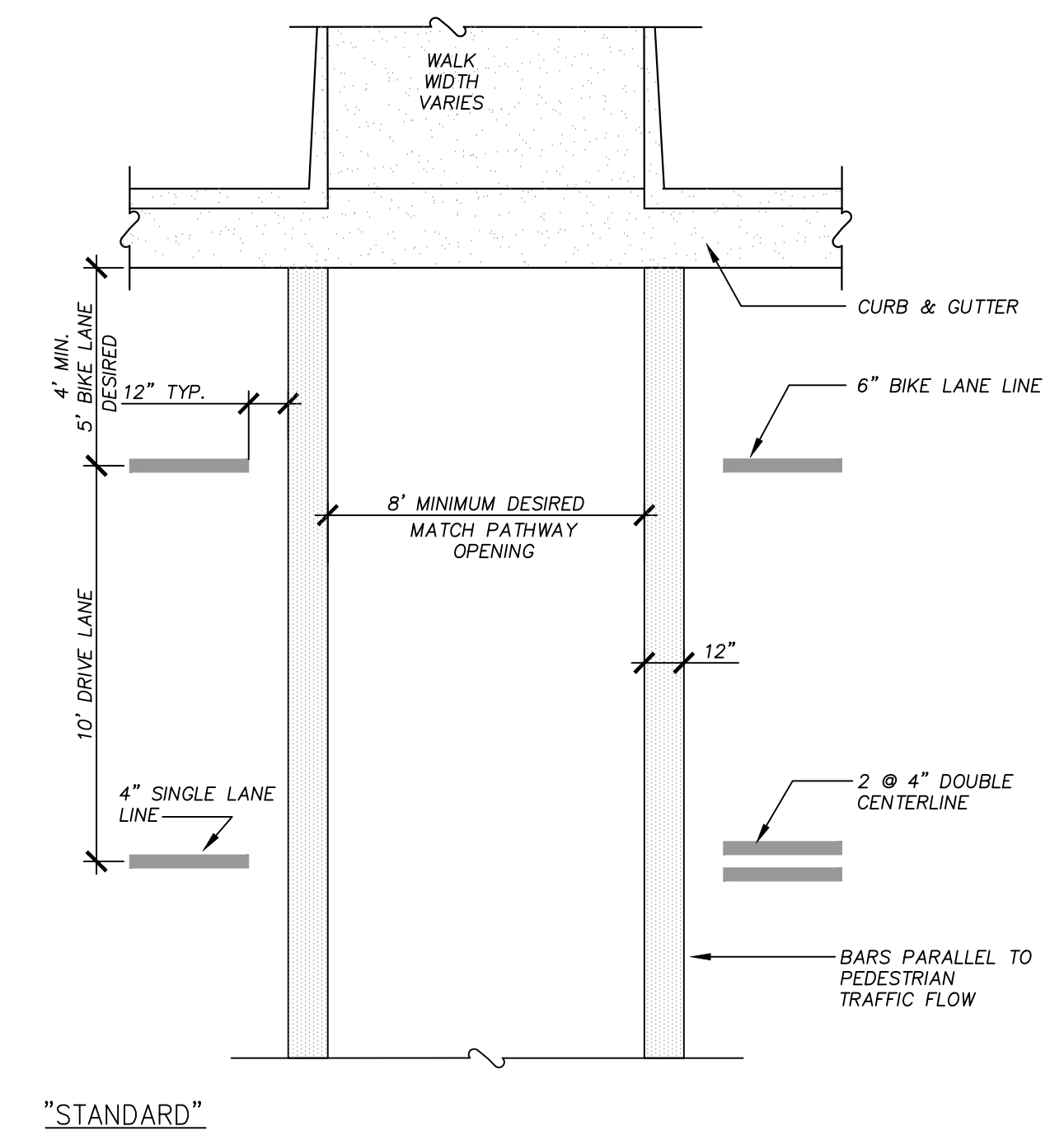
BIDS \_\_\_\_\_

SITE DETAILS

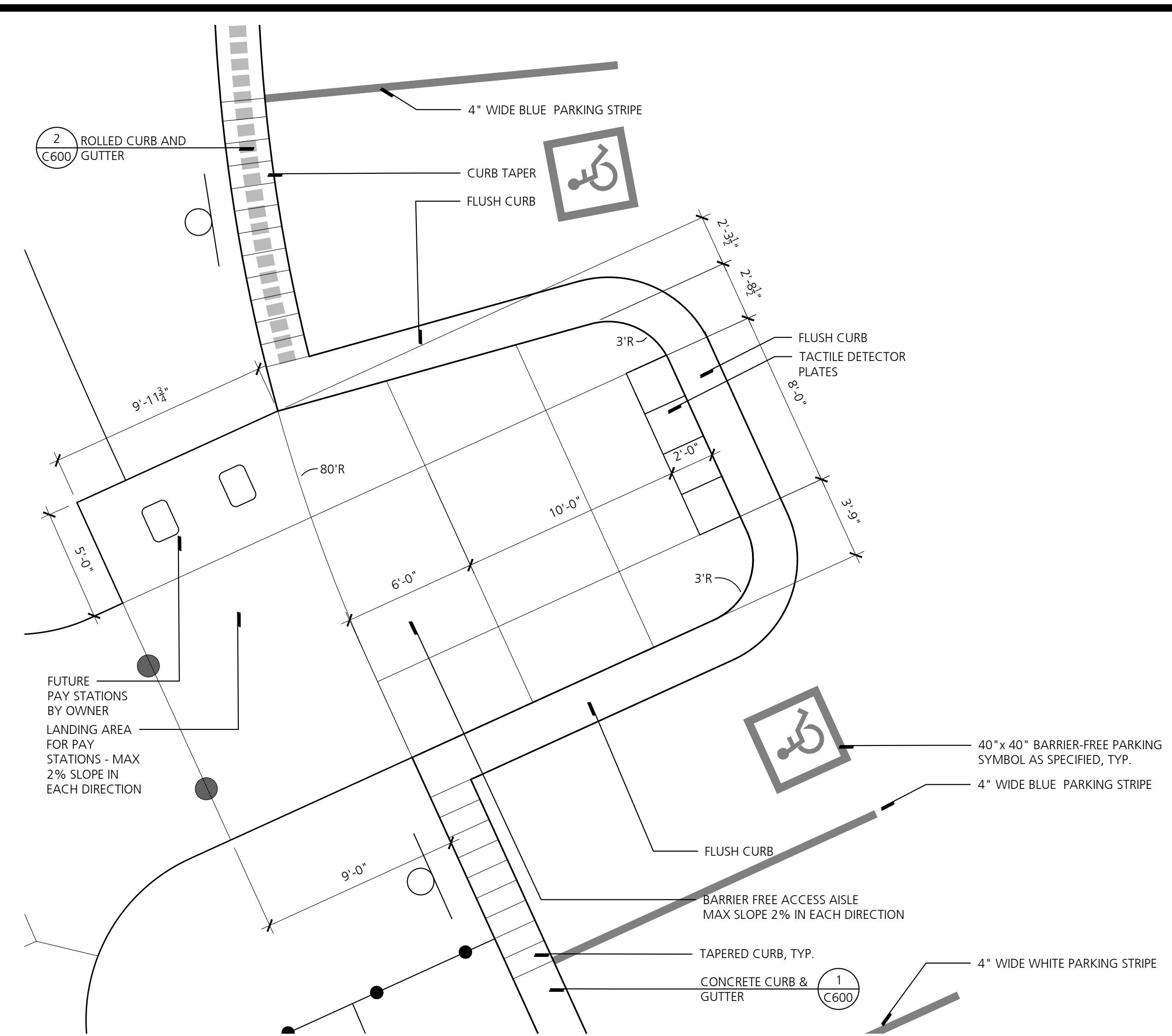
C601



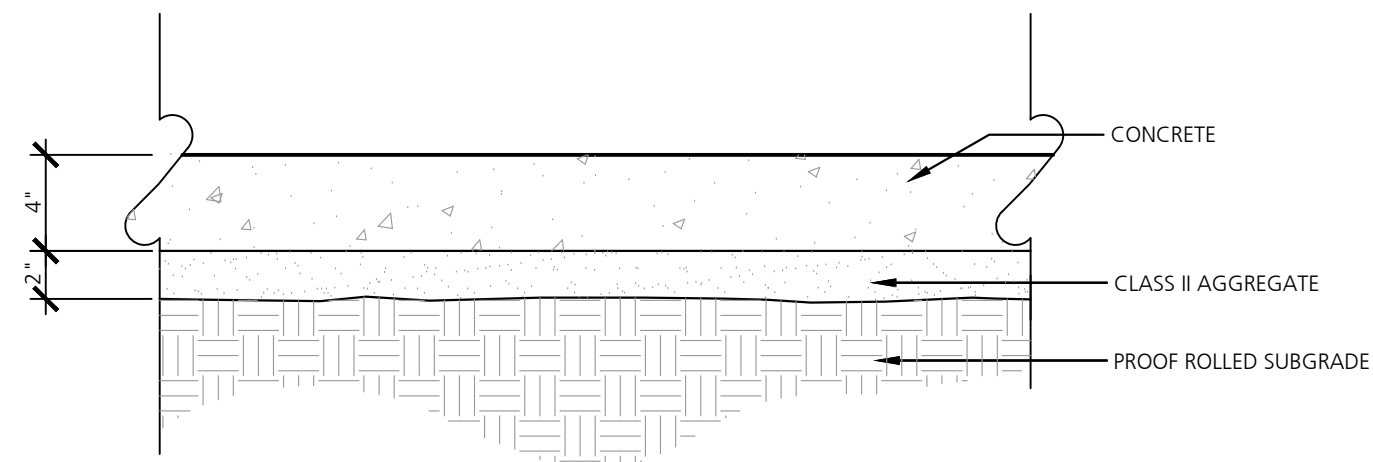
1 Valley Gutter  
 C601 SCALE: 1/2" = 1'-0"



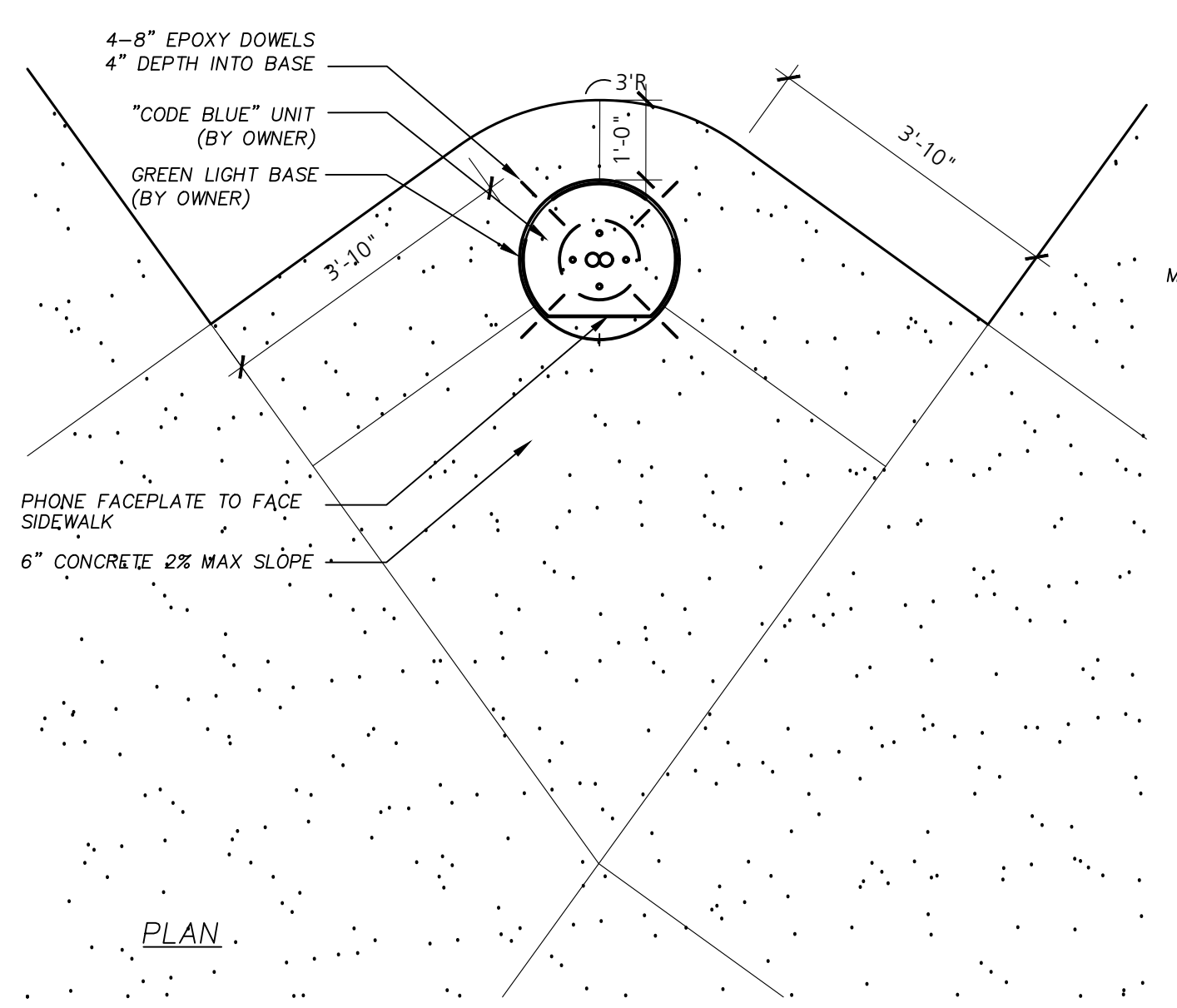
2 Crosswalk Marking - Standard  
 C601 NO SCALE



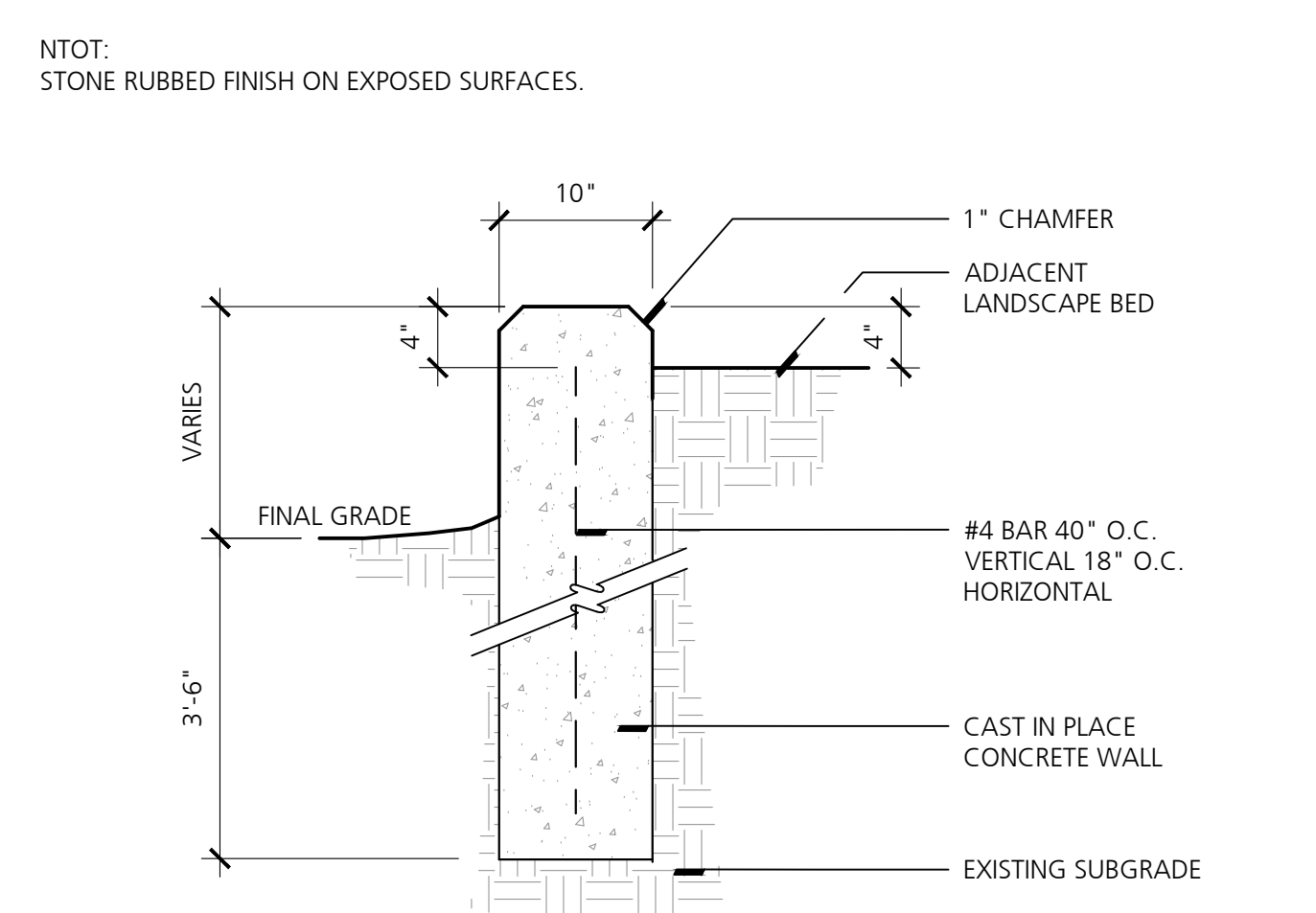
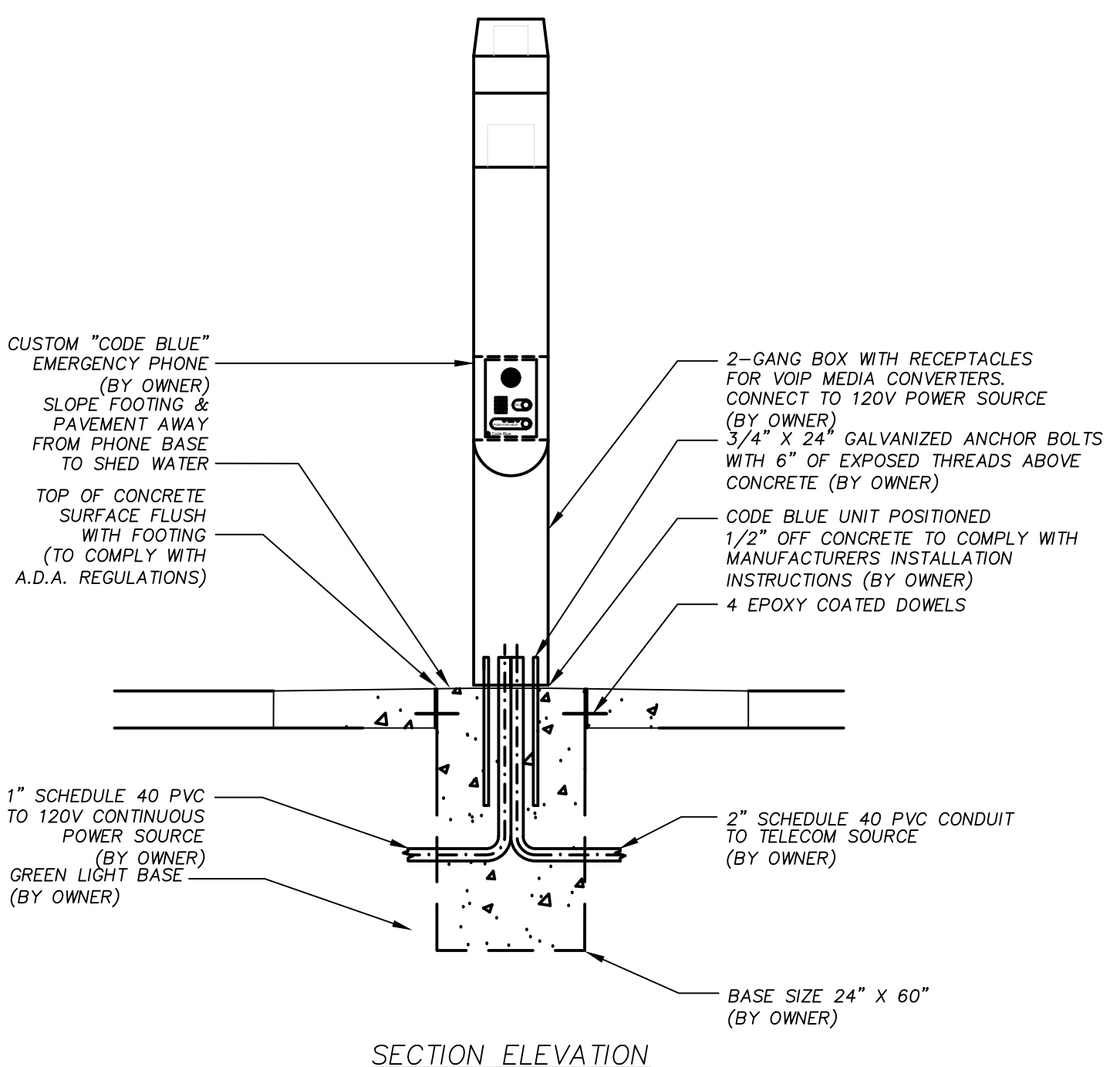
3 Curb Ramp - Peninsula  
 C601 SCALE: 1/4" = 1'-0"



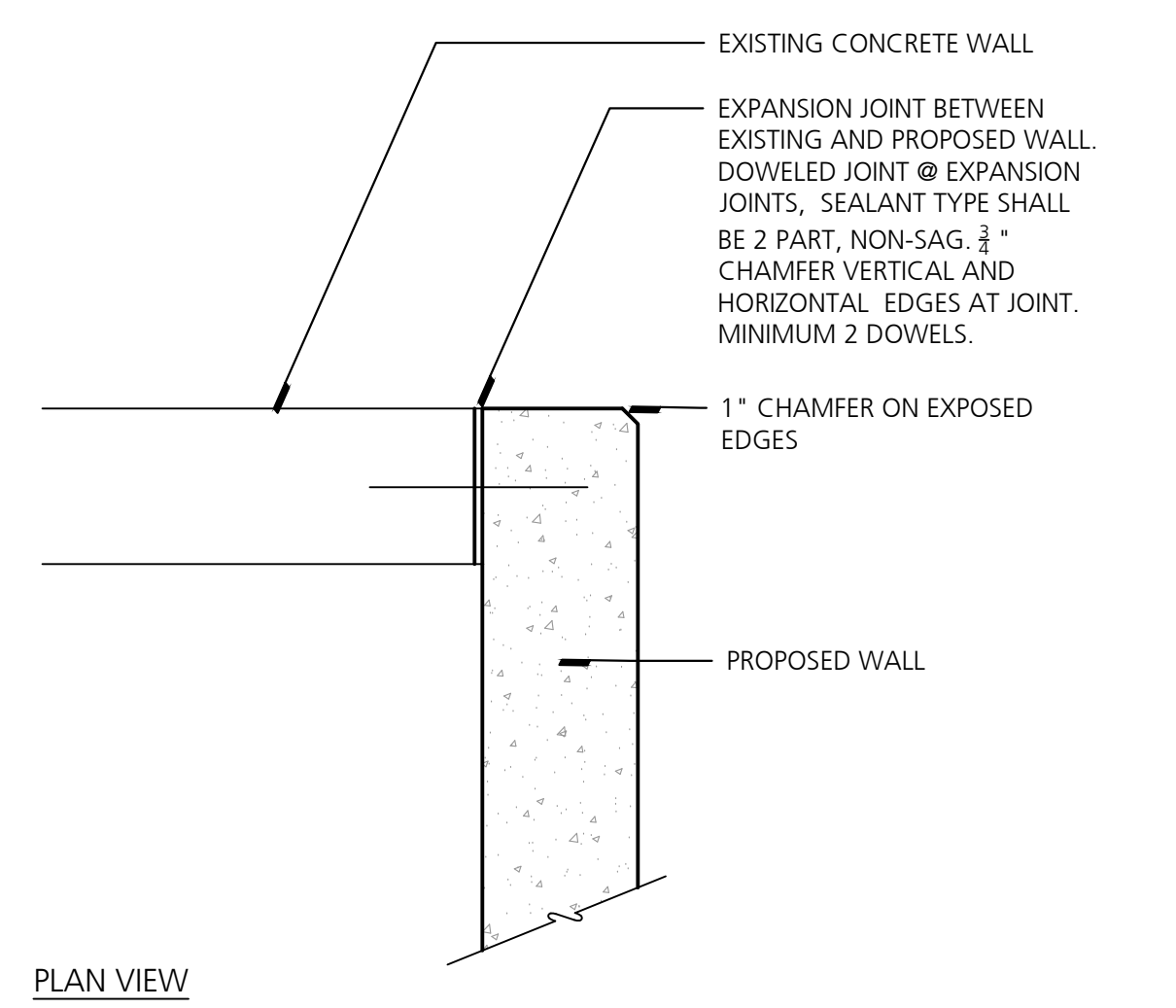
4 4" Concrete  
 C601 SCALE: 1-1/2" = 1'-0"



5 Green Light Phone Pad  
 C601 SCALE: 1/2" = 1'-0"

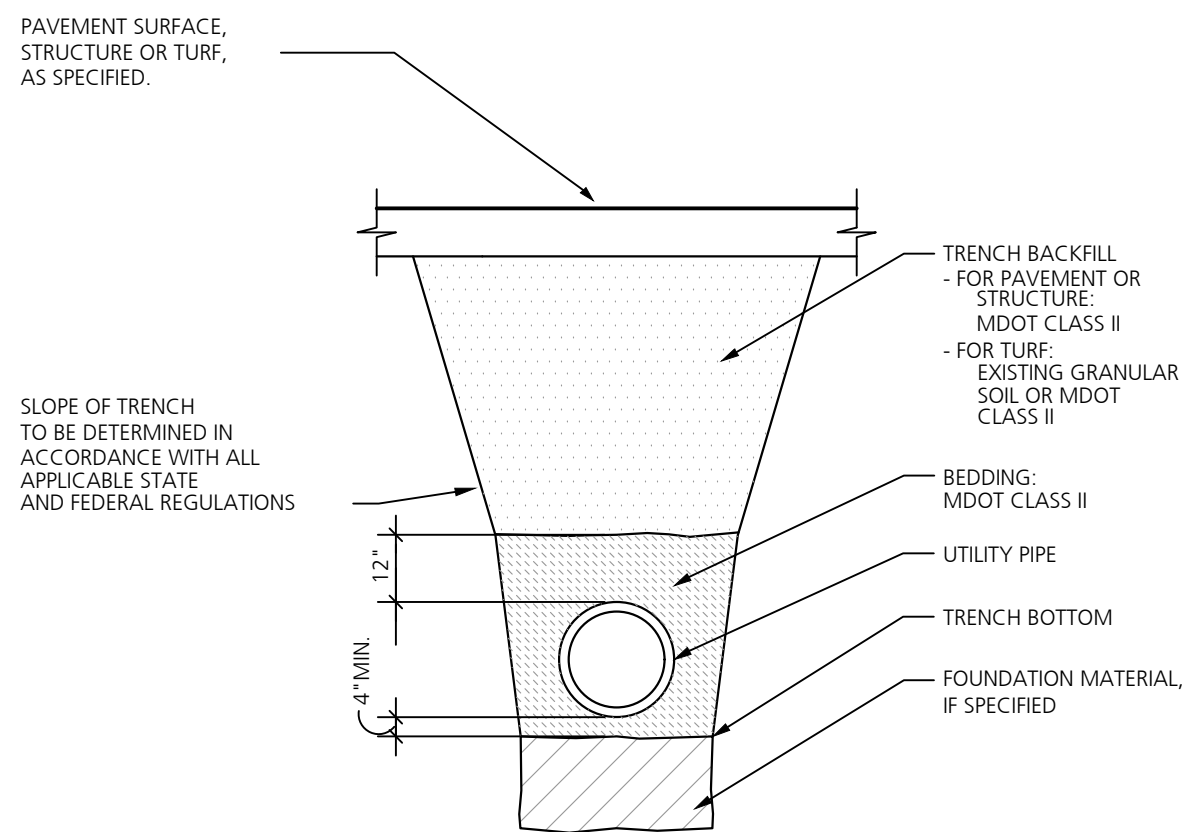
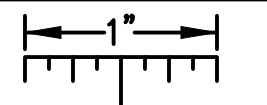


6 Concrete Retaining Wall  
 C601 SCALE: 1" = 1'-0"



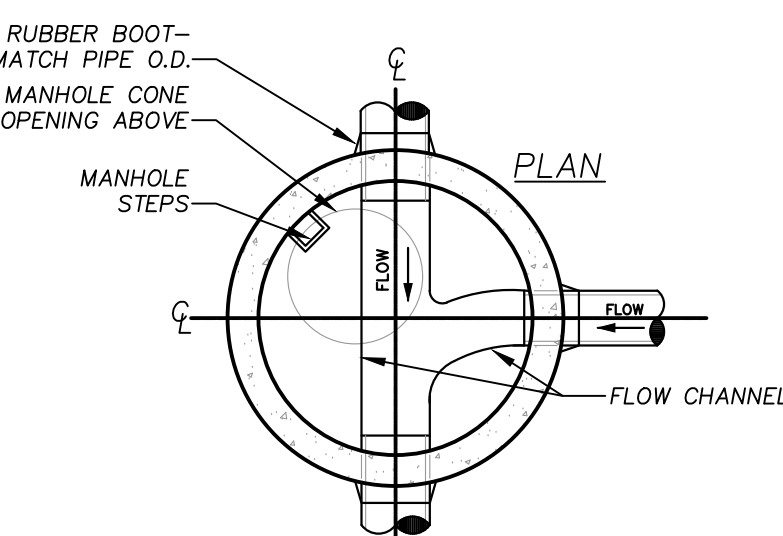
7 Concrete Retaining Wall at Existing Wall  
 C601 SCALE: 1" = 1'-0"

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



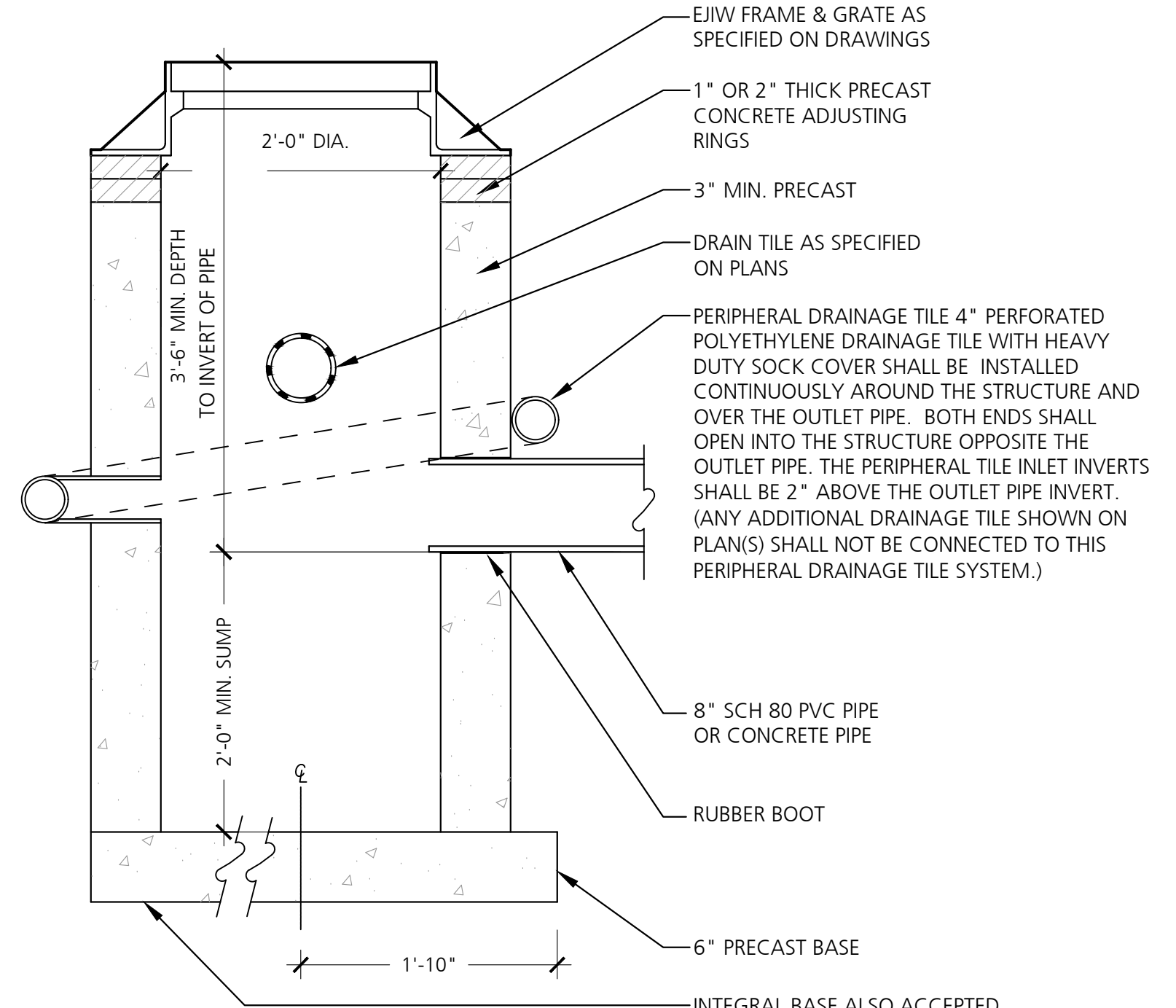
1 Utility Trench

NO SCALE



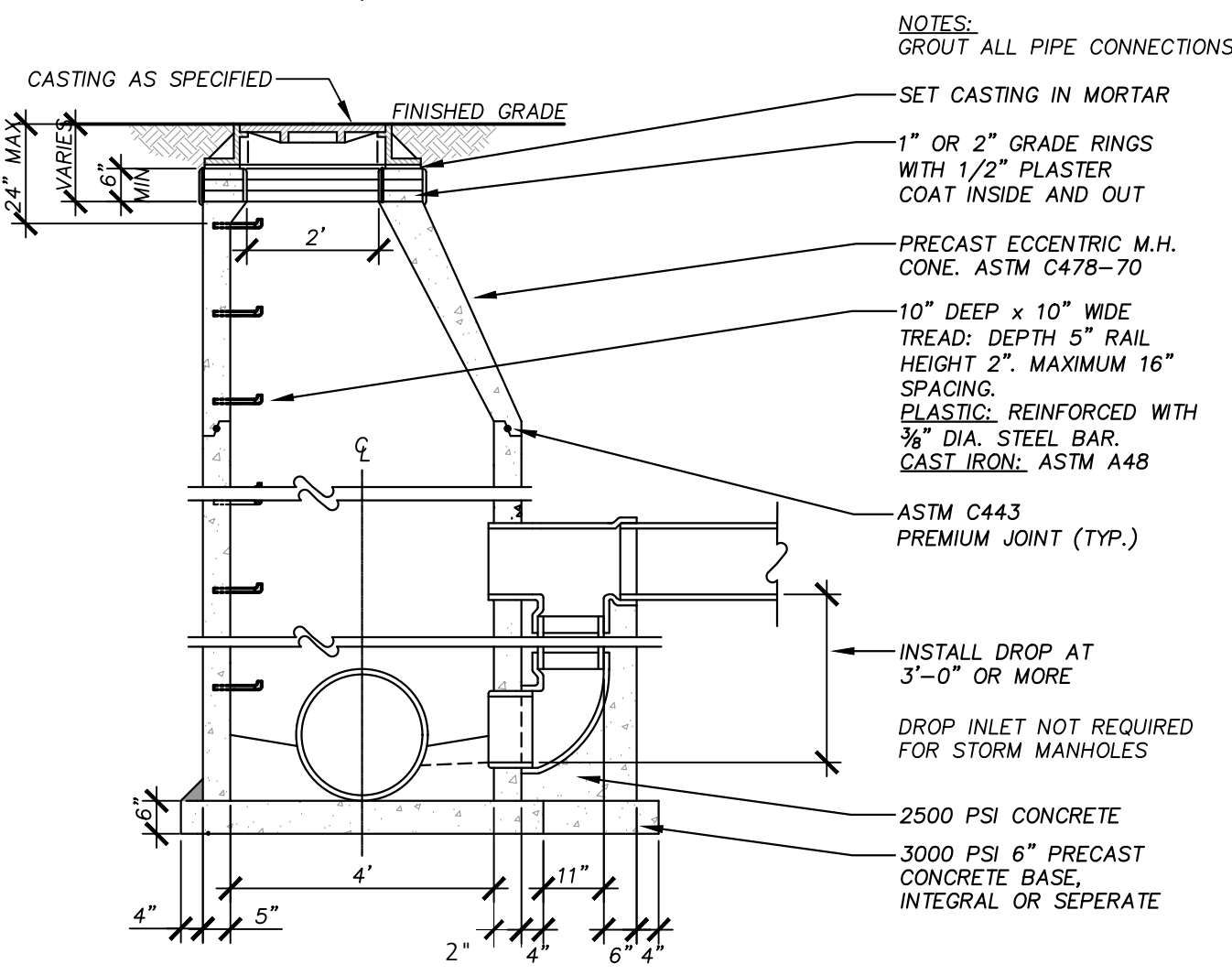
3 Manhole

SCALE: 3/8"=1'-0"



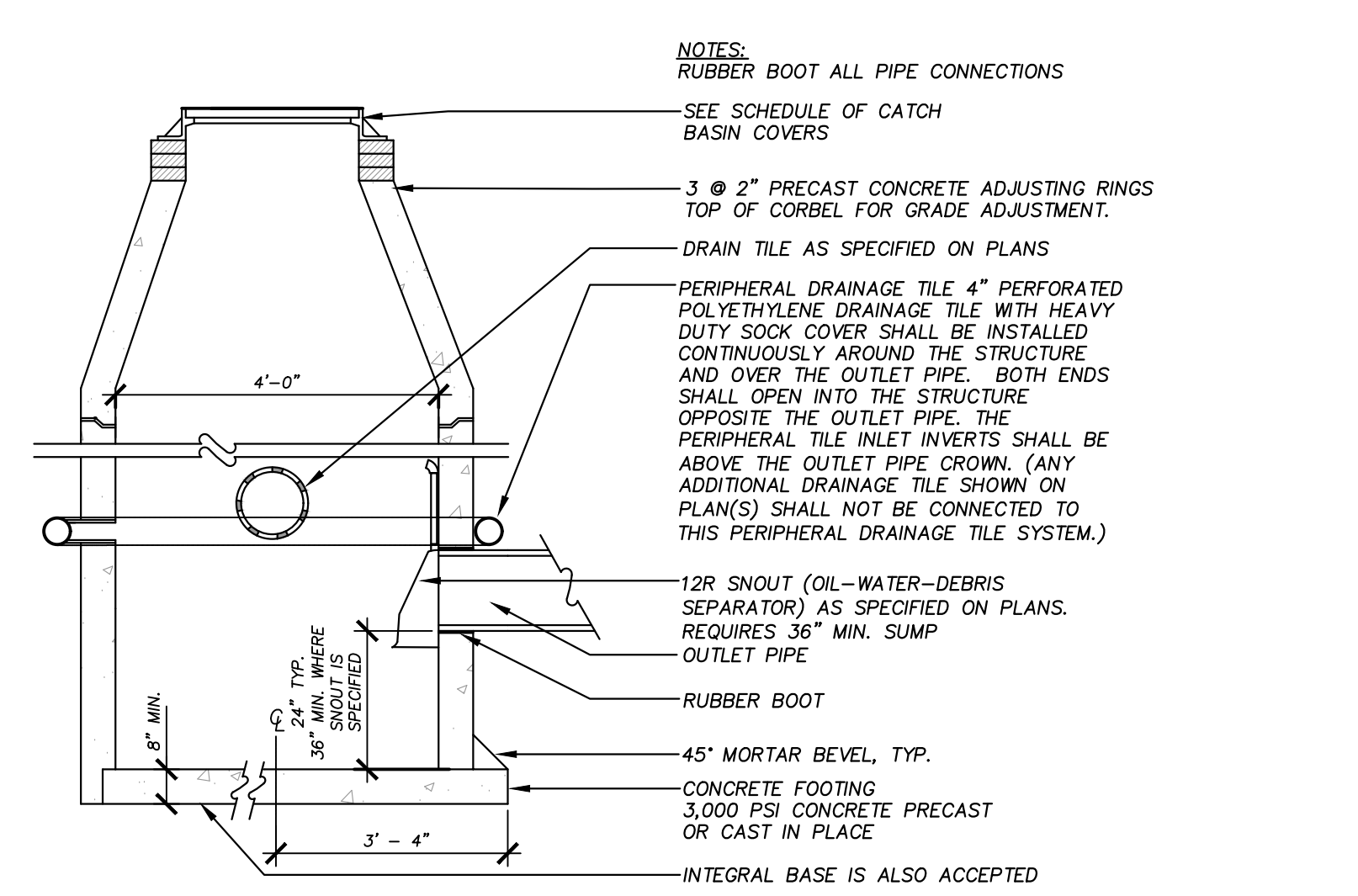
2 2' Catch Basin

NO SCALE



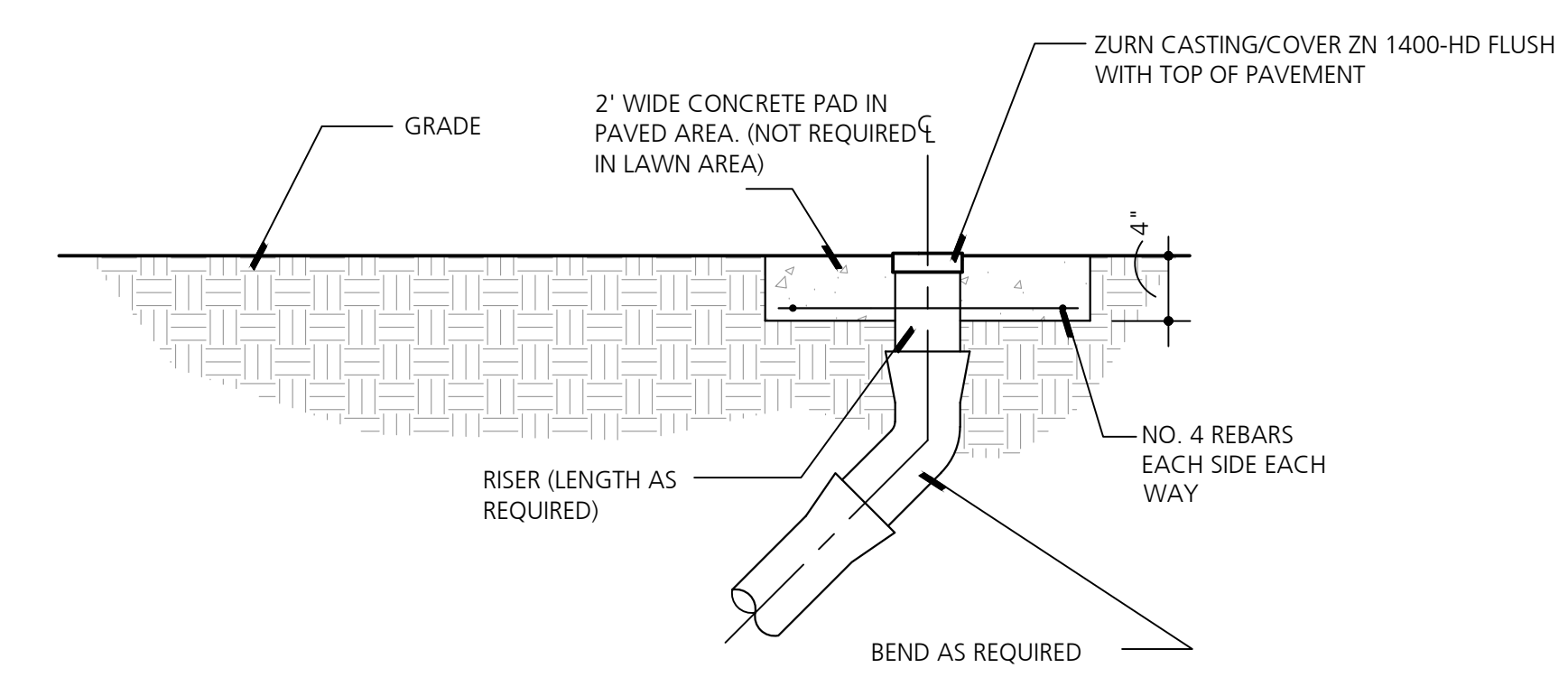
3 Manhole

SCALE: 3/8"=1'-0"



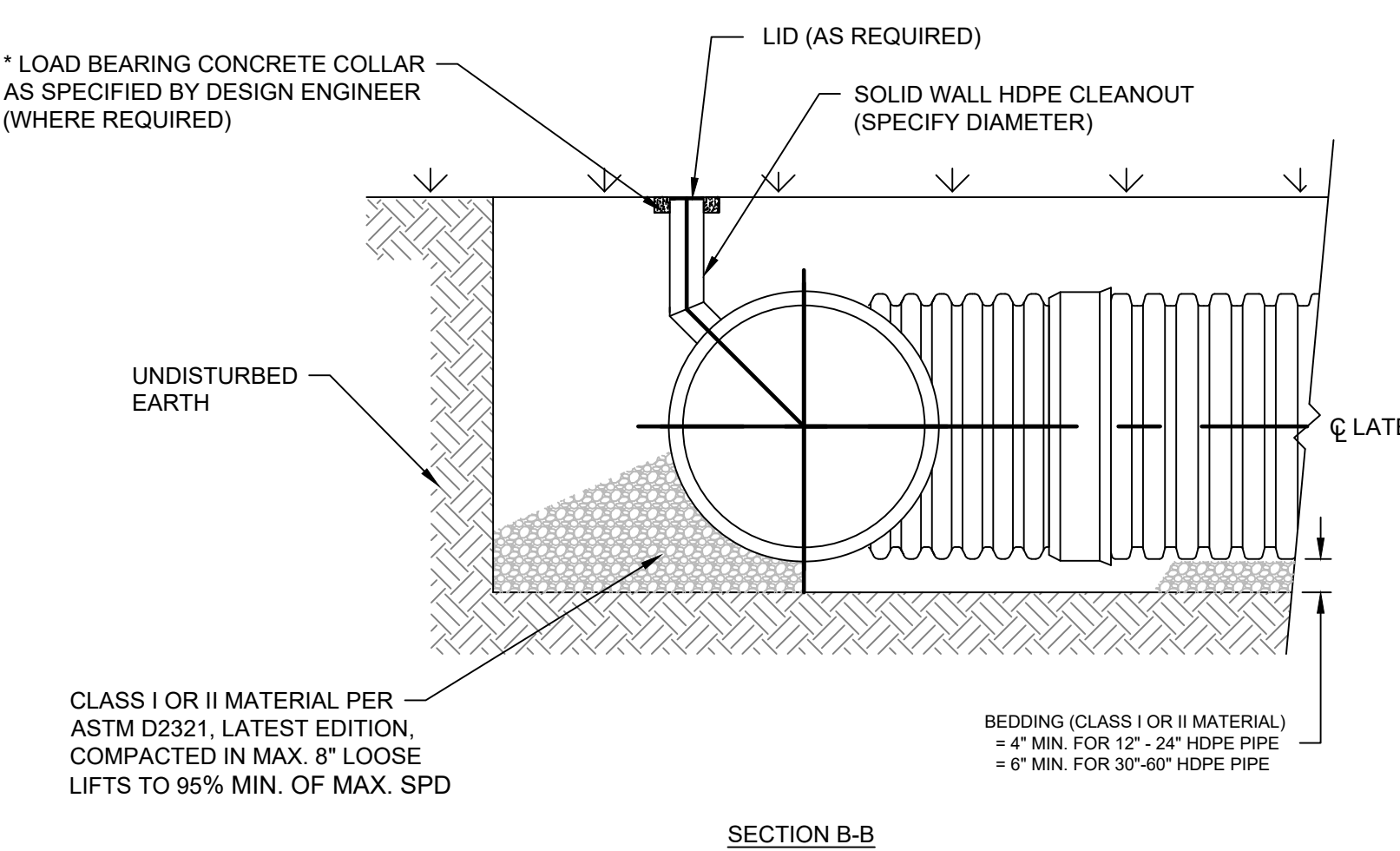
4 Catch Basin - Precast

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



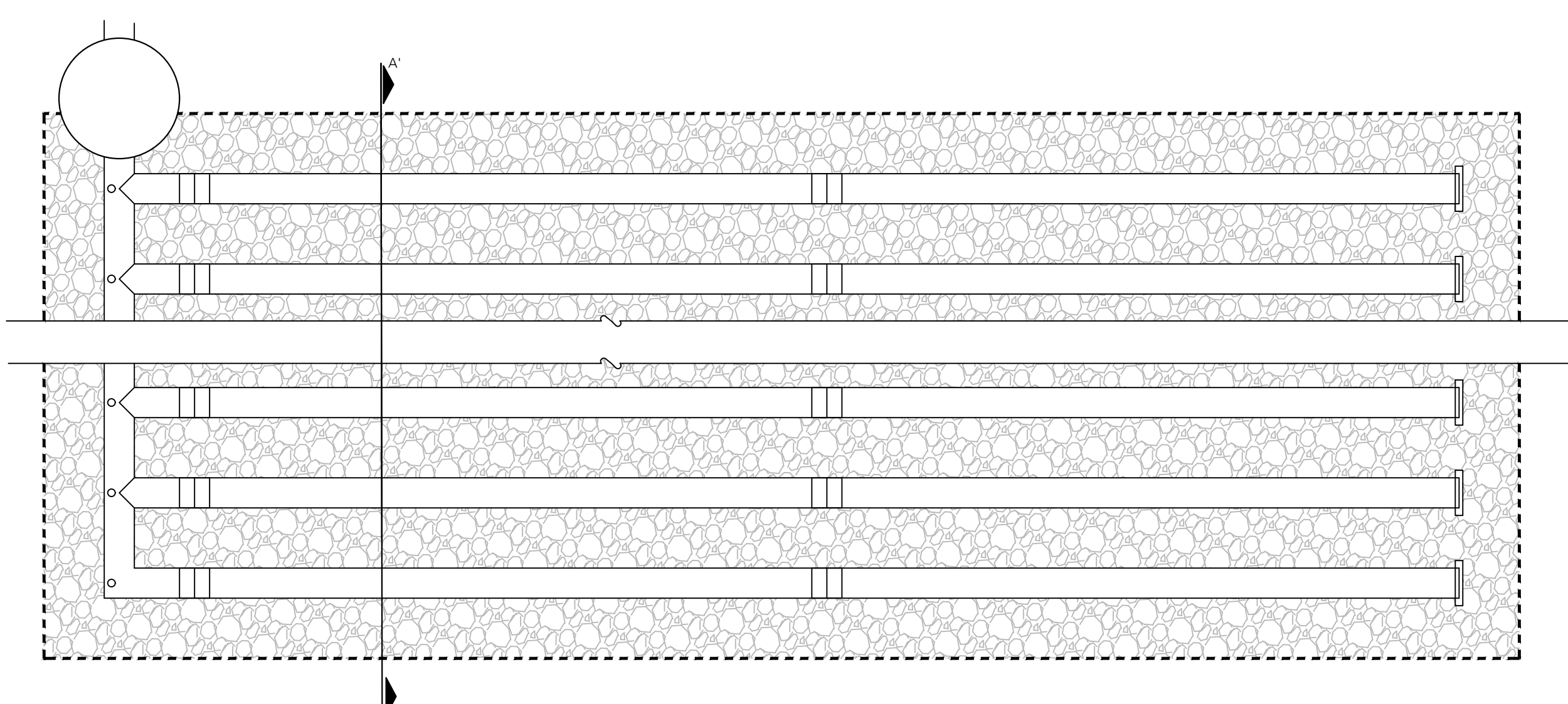
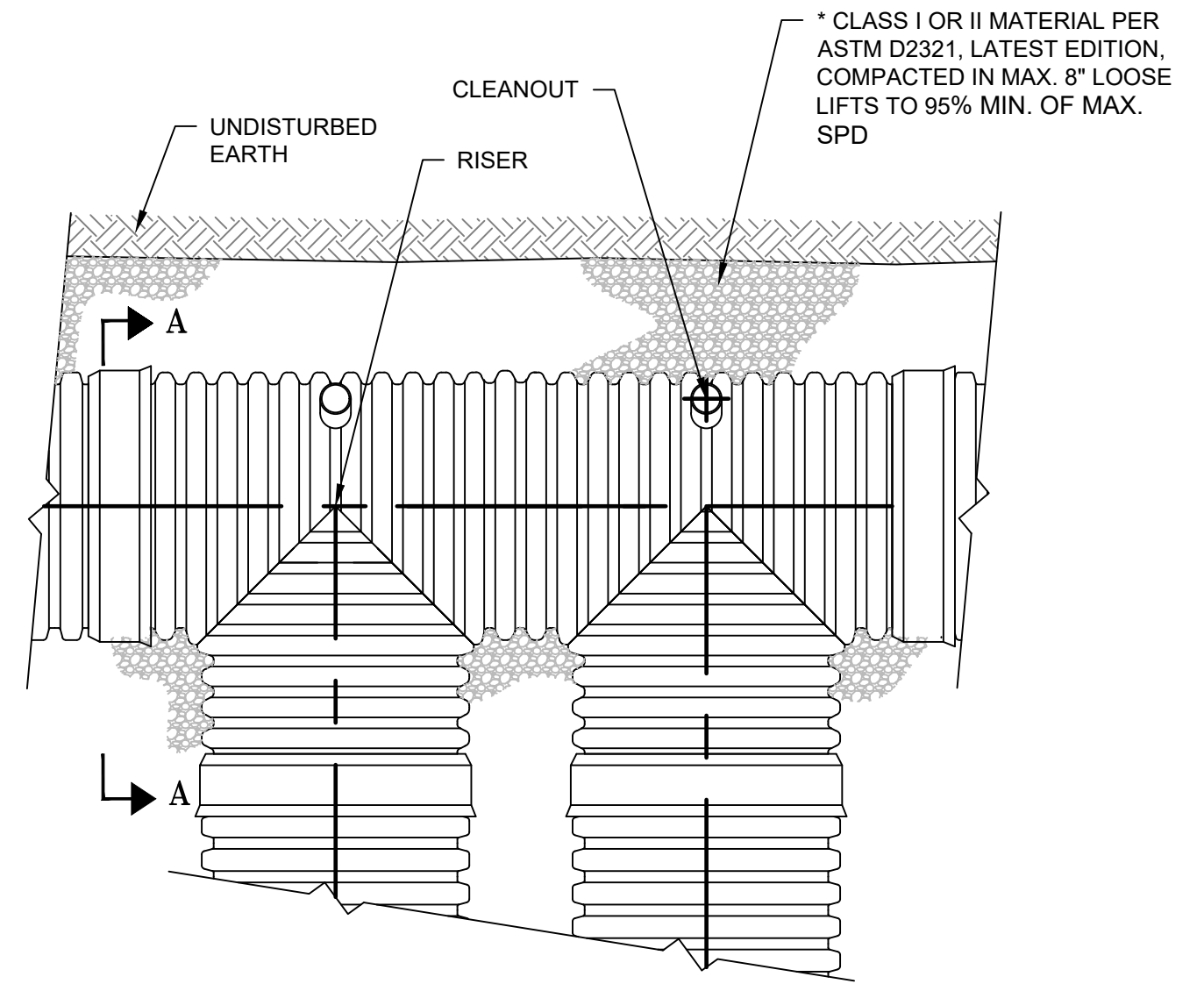
4 Cleanout Lid

NO SCALE



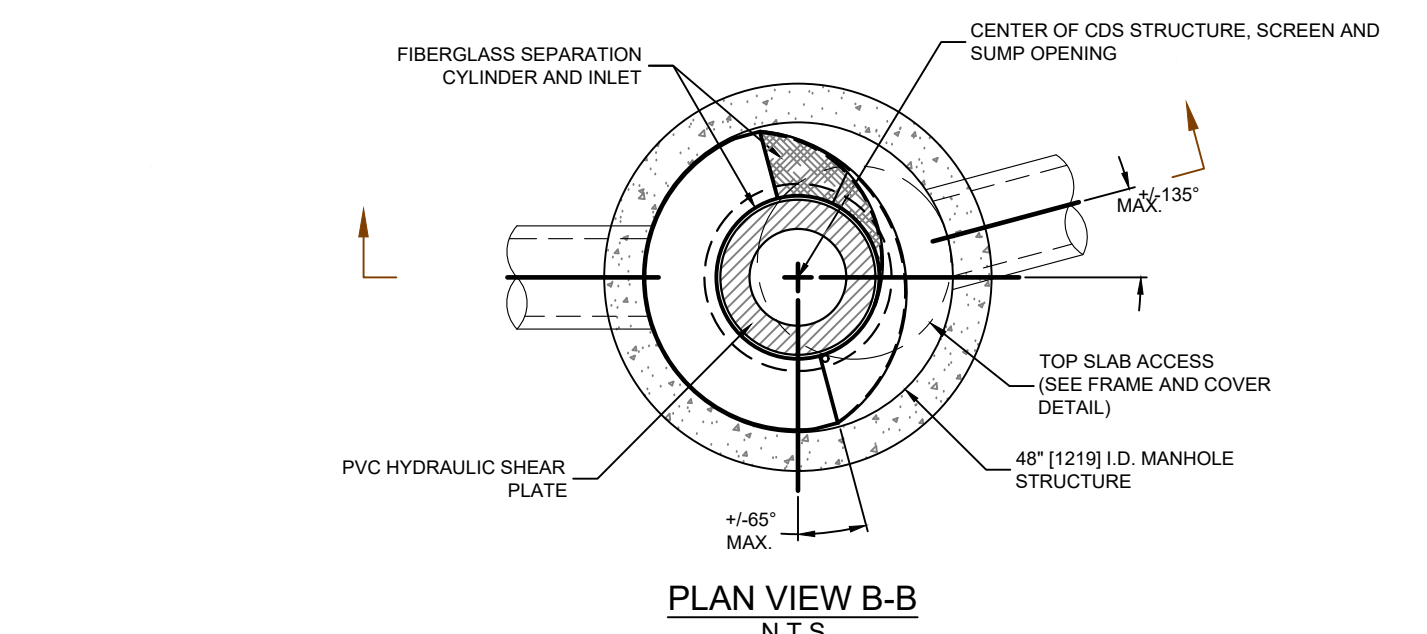
8 Stormwater Detention System Header and Cleanouts

NO SCALE



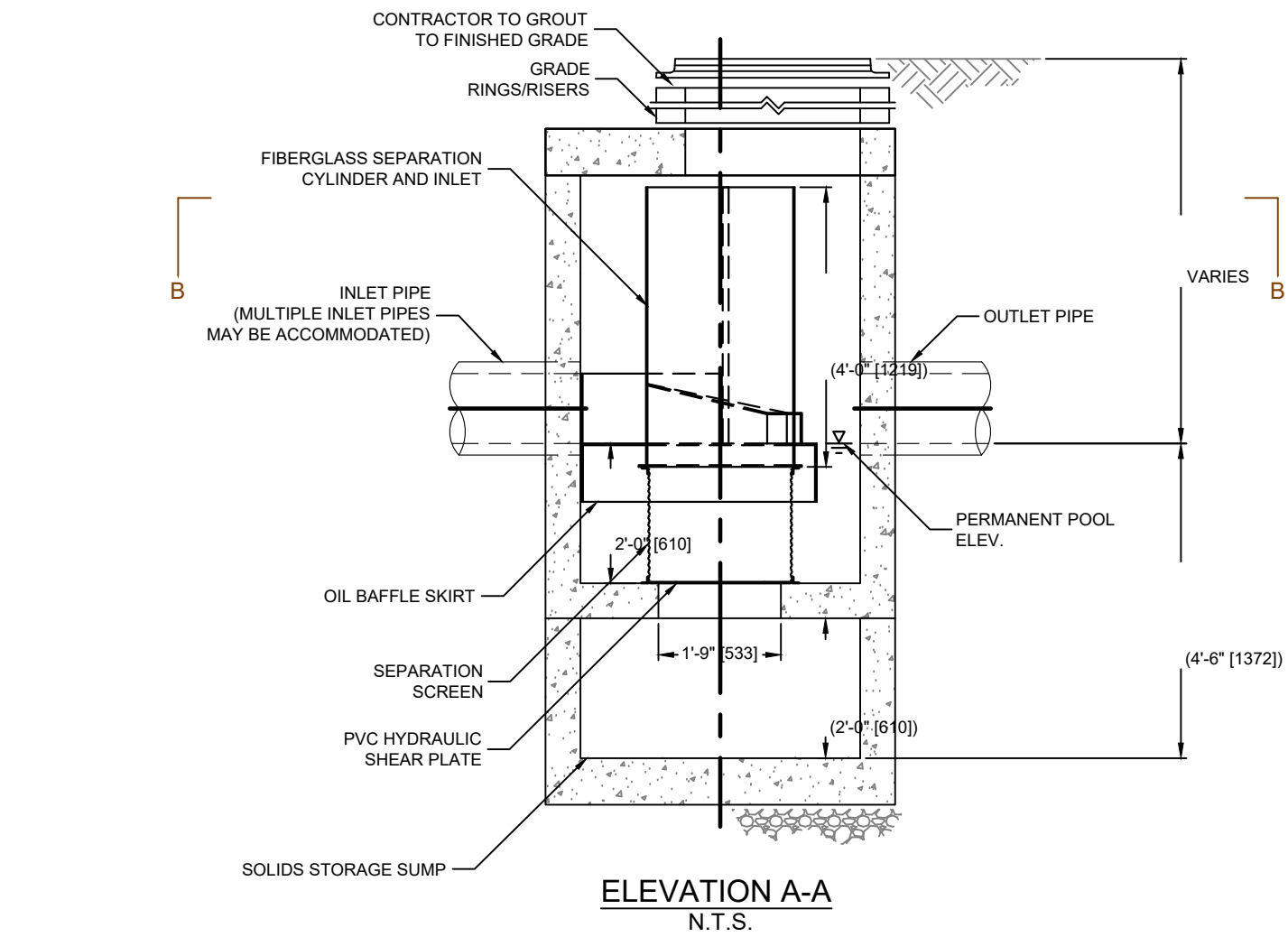
8 Perforated HDPE Stormwater Detention System

NO SCALE



PLAN VIEW B-B

N.T.S.



ELEVATION A-A

N.T.S.

CDS2015-4-C DESIGN NOTES

THE STANDARD CDS2015-4-C CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	SQU 110
WATER QUALITY FLOW RATE (CFS OR L/S)	0.23
PEAK FLOW RATE (CFS OR L/S)	0.23
RETURN PERIOD OF PEAK FLOW (YRS)	10-YEAR
SCREEN APERTURE (200 OR 475)	475
PIPE DATA	1E MATERIAL DIAMETER
INLET PIPE 1	835.05 CL IV RCP 12"
INLET PIPE 2	835.05 HDPE 12"
OUTLET PIPE	
RIM ELEVATION	

- GENERAL NOTES
- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
  - DIMENSIONS MARKED WITH (1) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
  - FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. [www.conteches.com](http://www.conteches.com)
  - CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
  - STRUCTURE SHALL MEET BASKETT HDSD AND CASTINGS SHALL MEET HDSD (ASHTO M 386) LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.
  - PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
- INSTALLATION NOTES
- ANY SUB-BASE BACKFILL DEPTH, AND/OR ANTI-FLOTTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
  - CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
  - CONTRACTOR TO MAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT. HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.
  - CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
  - CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT. HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

**CONTECH ENGINEERED SOLUTIONS LLC**  
 2025 Center Pointe Dr., Suite 102, West Chester, OH 45381  
 900-338-1122 513-645-7000 513-645-7893 FAX

CDS2015-4-C  
 INLINE CDS  
 STANDARD DETAIL

5 Stormwater Quality Unit - SQU

NO SCALE

CAPITAL PROJ. NO. CP23106

PRJ. MGR. A. LINEBAUGH

ARCH. \_\_\_\_\_

MECH. \_\_\_\_\_

ELEC. G. HALSEY

CIVIL S. LAUGHLIN

L.A. D. WILBER

INT. DES. \_\_\_\_\_

CONST. REP. A. LINEBAUGH

APPR. \_\_\_\_\_

DATE 03-13-2024

SCALE As Shown

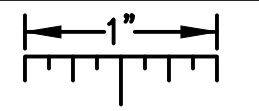
REVISIONS

50% CD REVIEW

95% CD REVIEW

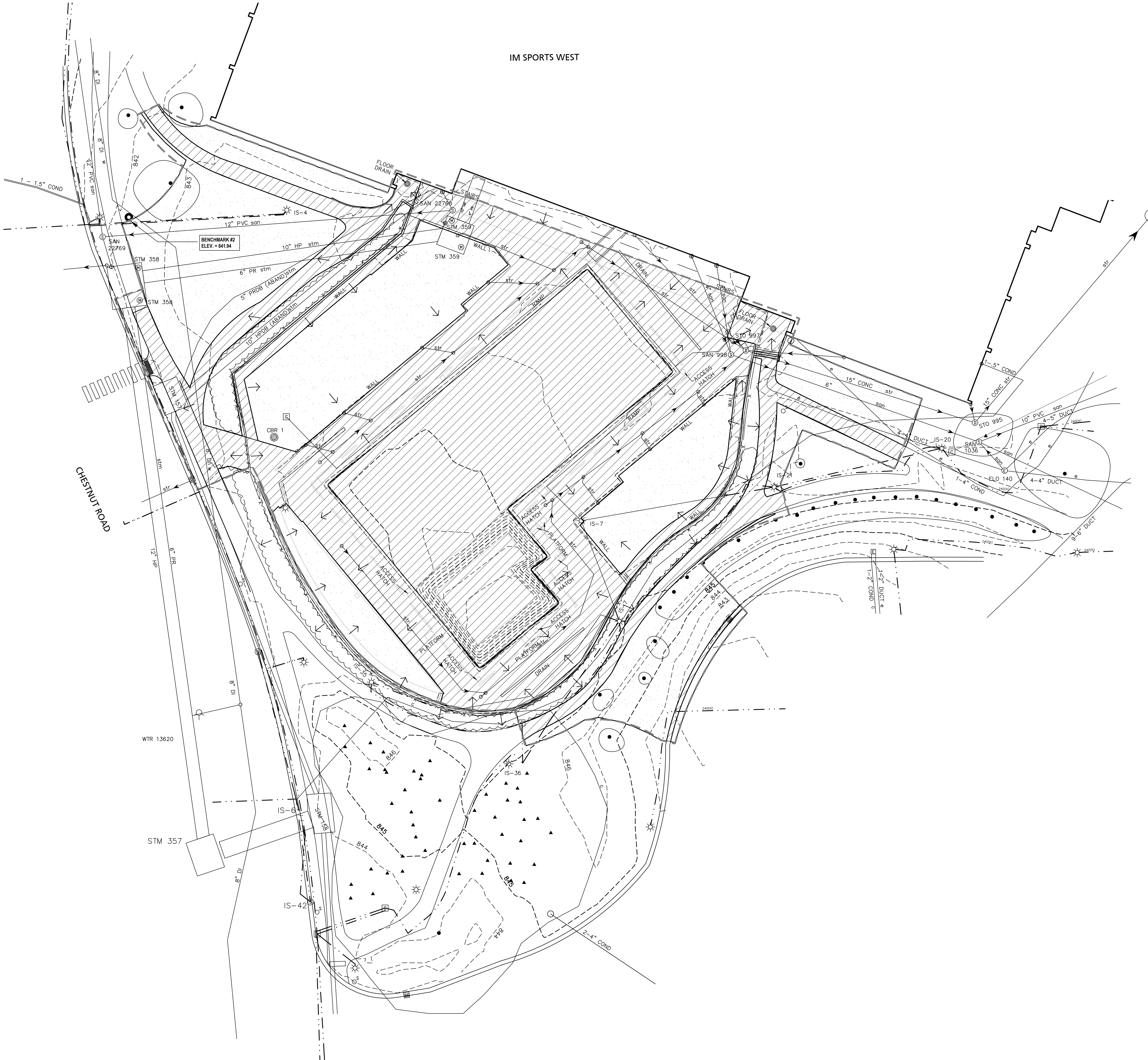
BIDS

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



**Beckett & Raeder**  
 ENGINEERS ARCHITECTS  
 1000 W. WASHINGTON ST. SUITE 100  
 ANN ARBOR, MI 48106-1502  
 TEL: 734.763.2222

IM SPORTS WEST



**STORMWATER MANAGEMENT LEGEND**

- IMPERVIOUS PAVEMENT & BUILDING ROOFS
- PERVIOUS OPEN SPACES
- OVERLAND FLOW LINE
- STORMWATER PIPE FLOW LINE
- LIMIT OF DISTURBANCE
- DRAINAGE AREA BOUNDARY
- PROPOSED OUTLET CONTROL STRUCTURE
- PROPOSED STORMWATER QUALITY UNIT

**STORMWATER MANAGEMENT NOTES**

- STORMWATER MANAGEMENT: PROPOSED 3.30 ACRES OF RUNOFF, WITH AN AVERAGE C<sub>N</sub> = 94
- CHANNEL PROTECTION: CHANGE IN THE 2-YEAR, 24-HOUR STORM EVENT PER MSU STORMWATER CALCULATOR SPREADSHEET DESIGN VOLUME = 3,312 cft
- WATER QUALITY: TREAT RUNOFF OF THE 90% EXCEEDANCE STORM (0.90 INCHES) PER MSU STORMWATER CALCULATOR SPREADSHEET DESIGN VOLUME = 9,545 cft
- FLOOD CONTROL: THIS DESIGN CREATES A RAIN GARDEN AND UNDERGROUND STORMWATER STORAGE AREA IN THE SOUTH PARKING LOT AND IS SIZED FOR THE MINIMUM REQUIRED DETENTION VOLUME. DESIGN VOLUME = 21,683 CFT
- EXTREME FLOOD: OVERLAND PASSAGE OF THE 100-YEAR FLOOD EVENTS
- PRE-TREATMENT: PROPRIETARY TREATMENT SYSTEM
- INFILTRATION RATE: SOIL BORINGS WERE TAKEN BY MATERIAL TESTING SERVICES. NO ONSITE INFILTRATION TESTS HAVE OCCURRED, HOWEVER, SOIL BORING INDICATE A MIX OF SAND AND CLAY.
- STONE POROSITY: 30% VOID SPACE WITHIN STONE BEDS

**MICHIGAN STATE UNIVERSITY**  
 Infrastructure Planning and Facilities

**LOT 61-SPARTAN STADIUM-WEST SIDE BUILD PARKING LOT**

CAPITAL PROJ. NO.  
CP23106

PRJ. MGR. A. LINEBAUGH

ARCH. \_\_\_\_\_

MECH. \_\_\_\_\_

ELEC. G. HALSEY

CIVIL S. LAUGHLIN

L.A. D. WILBER

INT. DES. \_\_\_\_\_

CONST. REP. A. LINEBAUGH

APPR. \_\_\_\_\_

DATE 03-13-2024

SCALE 1" = 20'

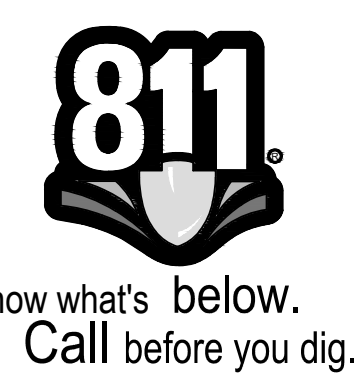
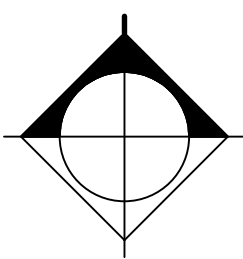
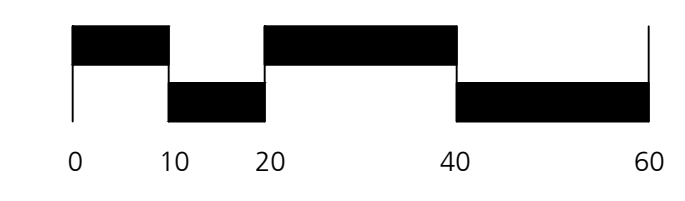
REVISIONS

50% CD REVIEW \_\_\_\_\_

95% CD REVIEW \_\_\_\_\_

BIDS \_\_\_\_\_

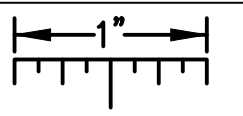
STORMWATER MANAGEMENT PLAN - EXISTING  
**C800**



c:\Users\collin.jackson\beckett & raeder, inc\proj\la - documents\msu west tm pool demo parking lot 2023\Drawings\current drawings\C800 Storm.mwg, C800\_EXISTING, 3/13/2024 6:51:36 PM, Collin Jackson, AutoCAD PLOT (General Documentation).pc3



THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.



**Beckett & Raeder**  
 ARCHITECTURAL  
 ENGINEERING  
 PLANNING  
 AND CONSTRUCTION

IM SPORTS WEST



**STORMWATER MANAGEMENT LEGEND**

- IMPERVIOUS PAVEMENT & BUILDING ROOFS
- PERVIOUS OPEN SPACES
- OVERLAND FLOW LINE
- STORMWATER PIPE FLOW LINE
- LIMIT OF DISTURBANCE
- PROPOSED STORMWATER QUALITY UNIT

**STORMWATER MANAGEMENT NOTES**

- STORMWATER MANAGEMENT: PROPOSED 3.30 ACRES OF RUNOFF, WITH AN AVERAGE CN= 94
- CHANNEL PROTECTION: CHANGE IN THE 2-YEAR, 24-HOUR STORM EVENT PER MSU STORMWATER CALCULATOR SPREADSHEET DESIGN VOLUME = 3,312 cft
- WATER QUALITY: TREAT RUNOFF OF THE 90% EXCEEDANCE STORM (0.90 INCHES) PER MSU STORMWATER CALCULATOR SPREADSHEET DESIGN VOLUME = 9,545 cft
- FLOOD CONTROL: THIS DESIGN CREATES A RAIN GARDEN AND UNDERGROUND STORMWATER STORAGE AREA IN THE SOUTH PARKING LOT AND IS SIZED FOR THE MINIMUM REQUIRED DETENTION VOLUME. DESIGN VOLUME = 21,683 CFT
- EXTREME FLOOD: OVERLAND PASSAGE OF THE 100-YEAR FLOOD EVENTS
- PRE-TREATMENT: PROPRIETARY TREATMENT SYSTEM
- INFILTRATION RATE: SOIL BORINGS WERE TAKEN BY MATERIAL TESTING SERVICES. NO ONSITE INFILTRATION TESTS HAVE OCCURRED, HOWEVER, SOIL BORING INDICATE A MIX OF SAND AND CLAY.
- STONE POROSITY: 30% VOID SPACE WITHIN STONE BEDS

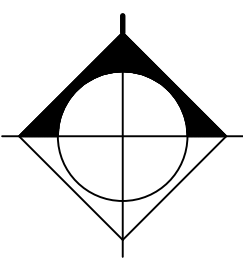
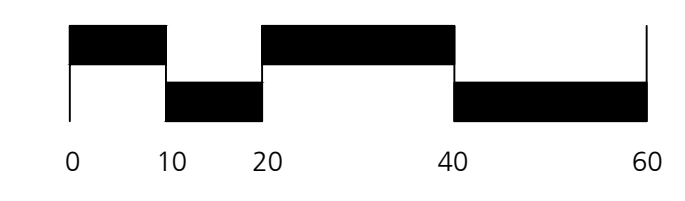
**MICHIGAN STATE UNIVERSITY**  
 Infrastructure Planning and Facilities

**LOT 61-SPARTAN STADIUM-WEST SIDE BUILD PARKING LOT**

CAPITAL PROJ. NO.	CP23106
PRJ. MGR.	A. LINEBAUGH
ARCH.	
MECH.	
ELEC.	G. HALSEY
CIVIL	S. LAUGHLIN
L.A.	D. WILBER
INT. DES.	
CONST. REP.	A. LINEBAUGH
APPR.	
DATE	03-13-2024
SCALE	1" = 20'
REVISIONS	
50% CD REVIEW	
95% CD REVIEW	
BIDS	

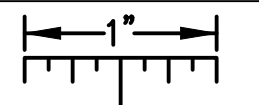
STORMWATER MANAGEMENT PLAN - PROPOSED

**C801**



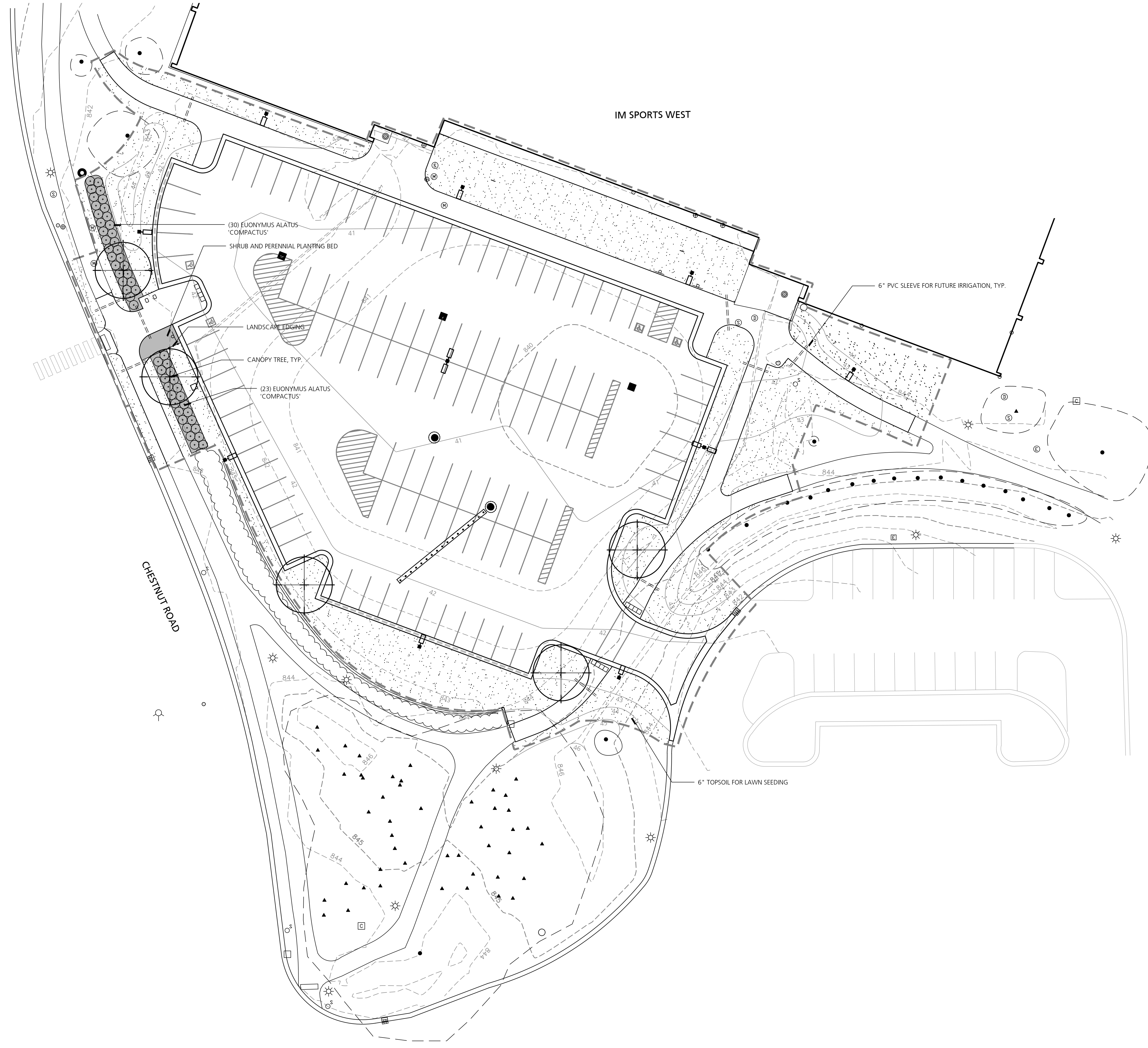
c:\users\collinjacobsen\beckett & raeder, inc\lri la - documents\msu west tm pool demo parking lot 2023\Draws\current drawings\C800 Storm.dwg, C801\_PROPOSED, 3/13/2024 6:51:39 PM, Collin Jackson, AutoCAD PDF (General Documentation).pc3

THE FOLLOWING DIMENSION EQUALS ONE INCH WHEN PRINTED TO SCALE.

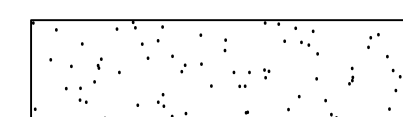

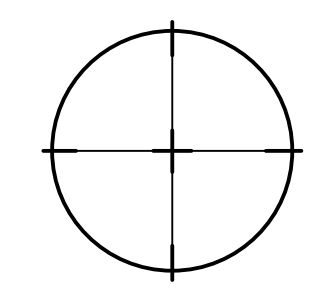
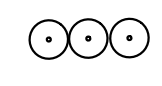

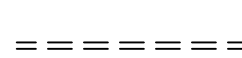


**Beckett & Raeder**  
Landscape Architecture  
1000 W. State St., Suite 101  
Ann Arbor, MI 48106-1001  
734.769.1234

**MICHIGAN STATE UNIVERSITY**  
Infrastructure Planning and Facilities



**LANDSCAPE LEGEND**

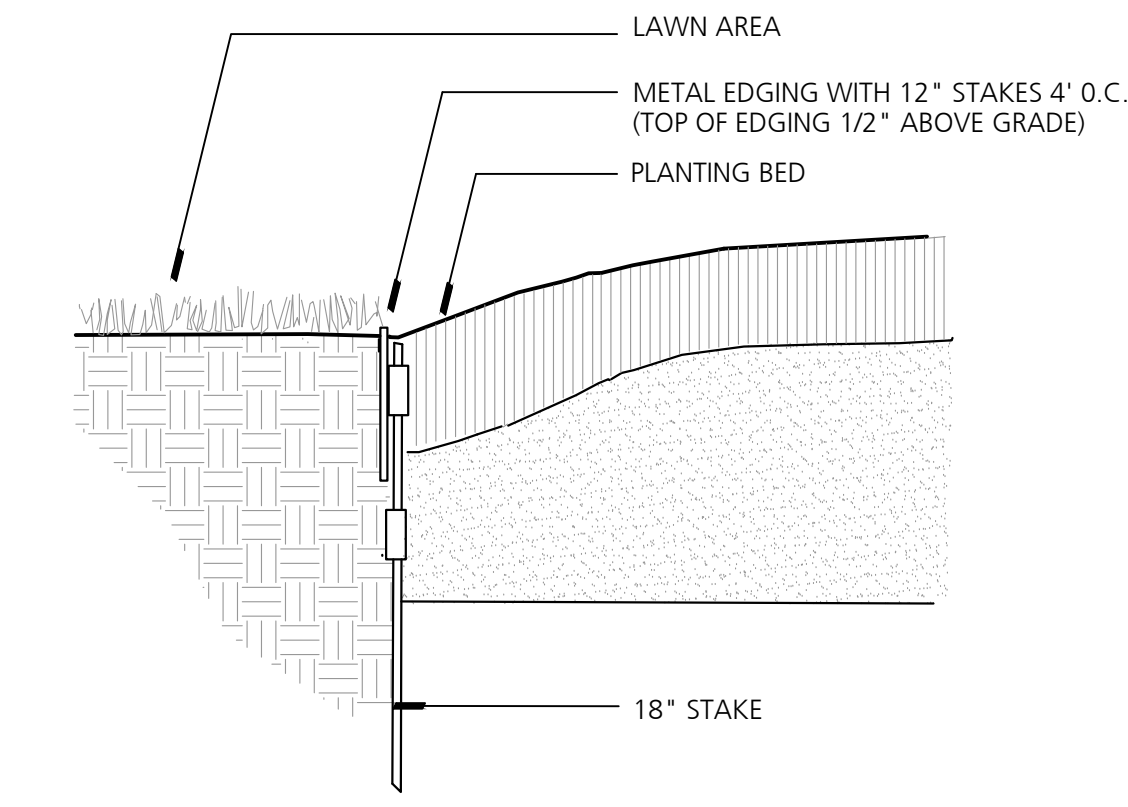
-  6" TOPSOIL AND LAWN SEEDING (BY OWNER)
-  12" PLANTING SOIL, 4" MULCH FOR LANDSCAPE BED (BY OWNER)
-  CANOPY TREE (BY OWNER)
-  LARGE SCREENING SHRUB (BY OWNER)
-  STEEL LANDSCAPE EDGING (BY OWNER)
-  PROPOSED 6" PVC SLEEVE FOR IRRIGATION SEE DETAIL 10/C600

**LANDSCAPE NOTES**

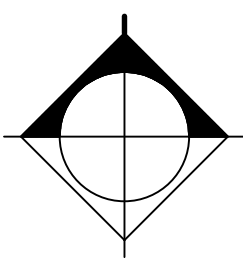
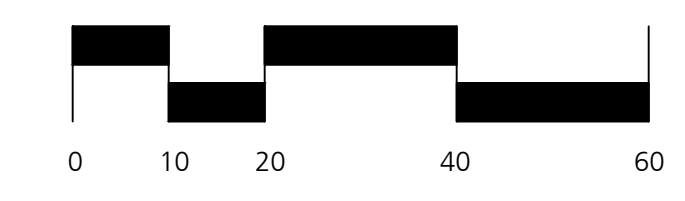
1. THIS SHEET PROVIDED FOR REFERENCE. OWNER TO COMPLETE SITE RESTORATION AND LANDSCAPING.
2. AREAS WITHIN THE PROJECT'S DISTURBED AREA THAT ARE NOT DESIGNATED AS PLANTING BEDS ARE TO RECEIVE 6" TOPSOIL AND LAWN SEEDING.
3. IRRIGATION IS NOT INCLUDED IN THE PROJECT.
4. TREE, SHRUB, ORNAMENTAL GRASSES, AND PERENNIAL PLANTINGS BY OWNER.
5. SEEDING BY OWNER.
6. TOPSOIL AND PLANTING SOIL PROVIDED AND PLACED BY OWNER.
7. OWNER TO PROVIDE AND INSTALL LANDSCAPE EDGING.

**SPECIFICATION NOTES**

1. ALL WORK AND MATERIALS SHALL CONFORM TO MICHIGAN STATE UNIVERSITY STANDARD SPECIFICATIONS FOR CONSTRUCTION UNLESS SPECIFICALLY NOTED OR DETAILED OTHERWISE ON DRAWINGS.



**Edging at Landscape Bed**  
NO SCALE



**811**  
Know what's Below.  
Call before you dig.

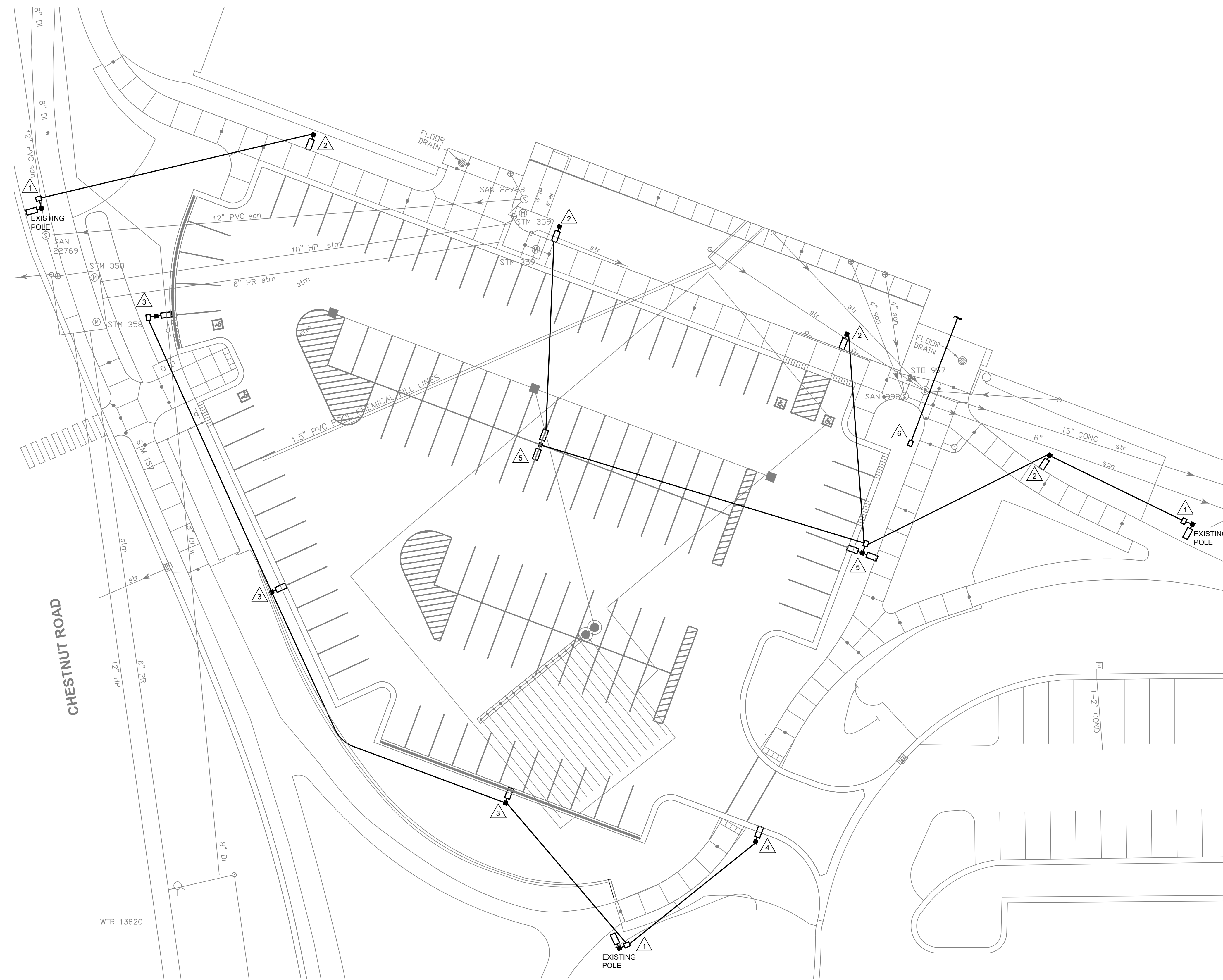
**LOT 61-SPARTAN STADIUM-WEST SIDE BUILD PARKING LOT**

CAPITAL PROJ. NO.	CP23106
PRJ. MGR.	A. LINEBAUGH
ARCH.	
MECH.	
ELEC.	G. HALSEY
CIVIL	S. LAUGHLIN
L.A.	D. WILBER
INT. DES.	
CONST. REP.	A. LINEBAUGH
APPR.	
DATE	03-13-2024
SCALE	1" = 20'
REVISIONS	
50% CD REVIEW	
95% CD REVIEW	
BIDS	

**SITE RESTORATION PLAN**

**L100**

c:\Users\collinjackson\beckett & raeder, inc\lri la - documents\msu west tm pool demo parking lot 2023\Drawings\current drawings\L100\_LP\_SR.dwg, L100\_3/13/2024 6:51:44 PM, Collin Jackson, AutoCAD PLOT (General Documentation).plc3



**ELECTRICAL SITE PLAN**  
 SCALE: 1" = 20'

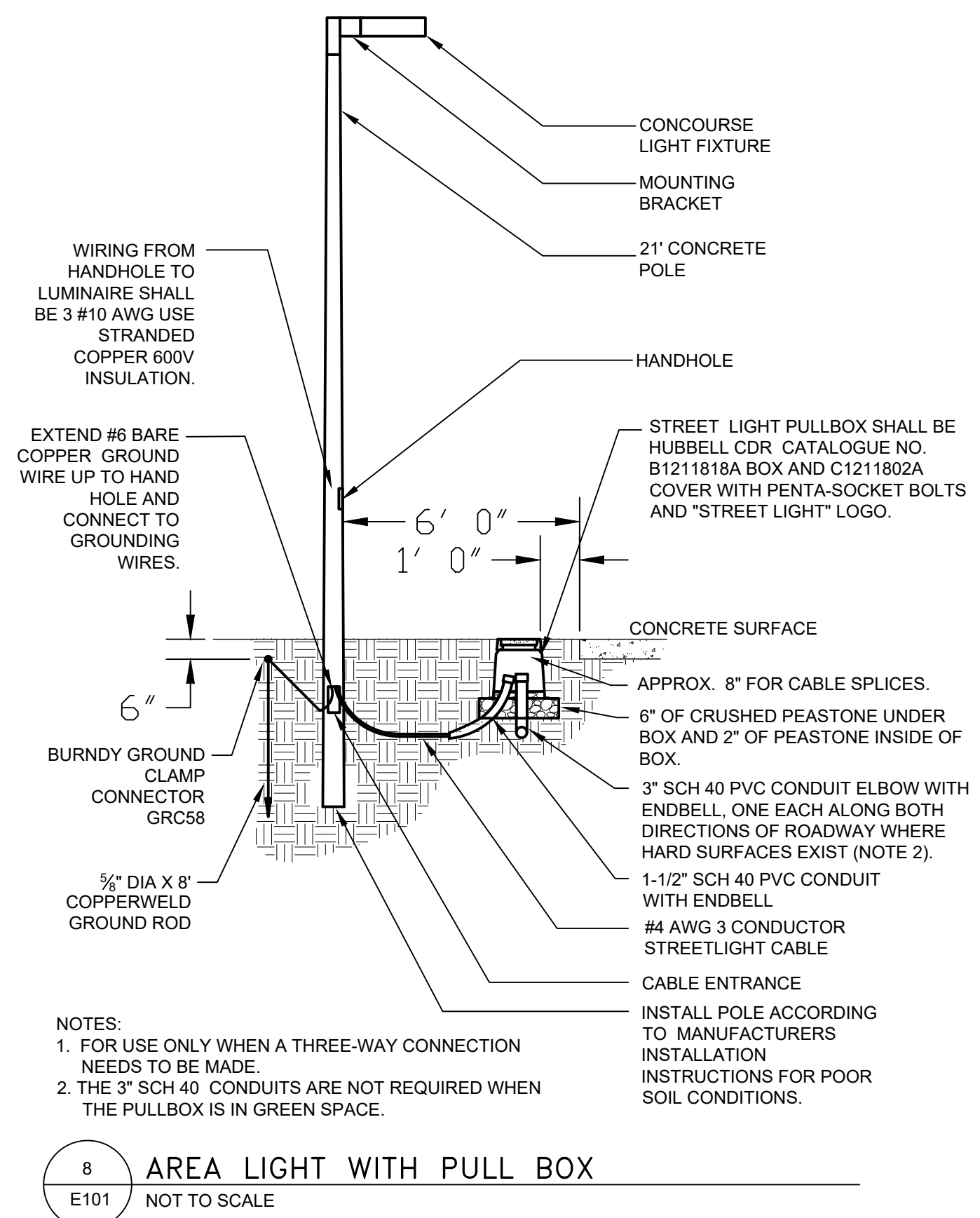
**ELECTRICAL GENERAL NOTES:**

1. ELECTRICIAN IS RESPONSIBLE FOR COMPLIANCE WITH MSU TECHNICAL STANDARDS AND ALL APPLICABLE CODES.
2. CONDUIT/STREET LIGHT CABLE PATHS ARE DIAGRAMMATIC ONLY. DETERMINE EXACT LOCATION/PATHS DURING CONSTRUCTION.
3. REFER TO DETAIL SHEET FOR ADDITIONAL REQUIREMENTS.
4. REFER TO CIVIL SHEETS FOR POLES BEING REMOVED.
5. REFER TO MSU TECHNICAL STANDARDS FOR STREET LIGHT CABLE REQUIREMENTS.
6. ROUTE STREET LIGHT CABLE IN CONDUIT BELOW ALL PAVED AREAS.
7. VERIFY EXISTING AND NEW UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION AND PLACEMENT OF POLES AND CONDUITS.

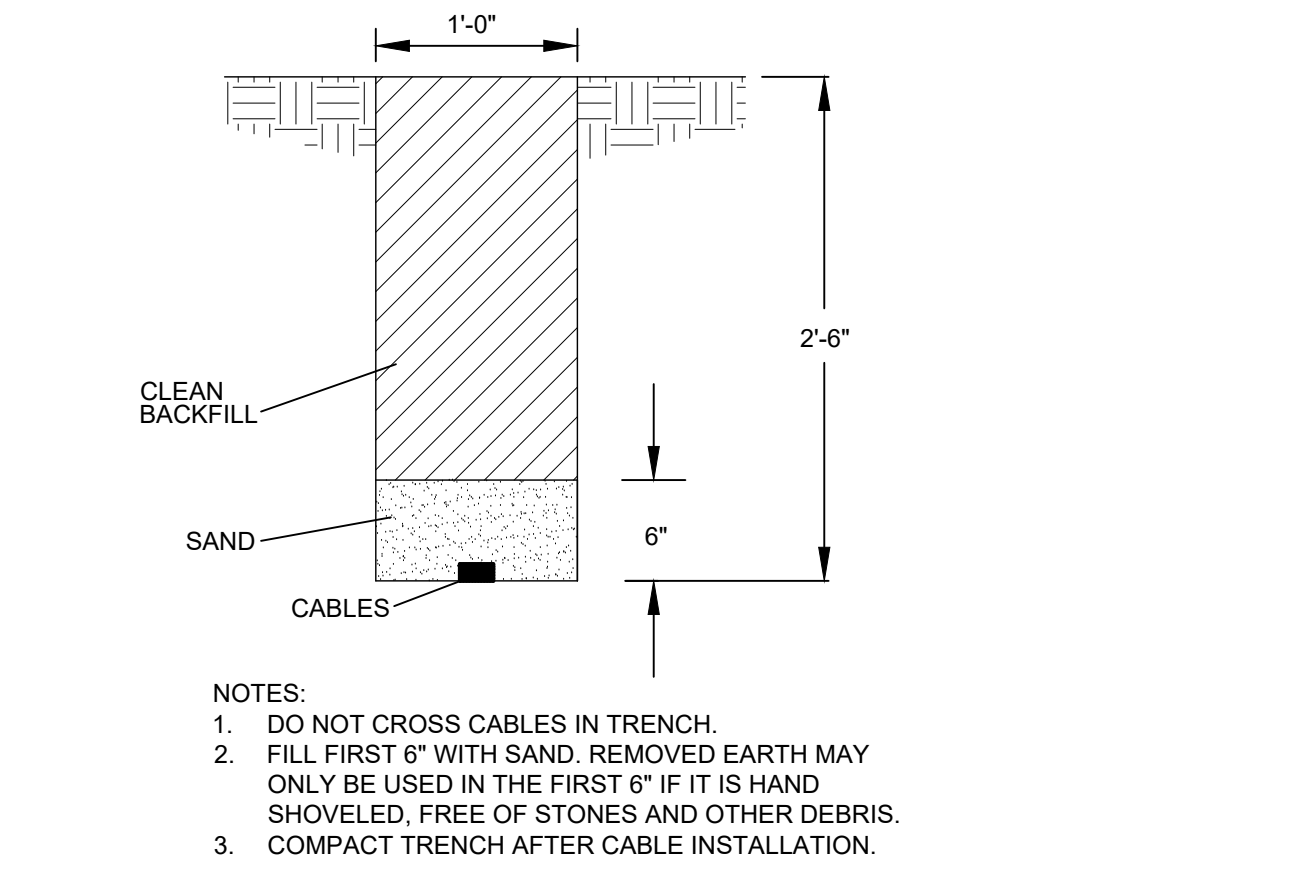
**ELECTRICAL PLAN NOTES:**

1. EXTEND EXISTING LIGHTING CIRCUIT FROM EXISTING LIGHT TO NEW LIGHT. PROVIDE NEW PULL BOX AT EXISTING POLE IF REQUIRED.
2. STANDARD MSU CONCOURSE POLE, HEAD AND TENON ADAPTER. PROVIDE TYPE 3 DISTRIBUTION. REFER TO DETAIL SHEET FOR ADDITIONAL INFORMATION.
3. STANDARD MSU STREET LIGHT POLE, HEAD AND TENON ADAPTER. PROVIDE TYPE 4 DISTRIBUTION. PROVIDE 4" HIGH CONCRETE BASE. REFER TO DETAIL SHEET FOR ADDITIONAL INFORMATION.
4. STANDARD MSU STREET LIGHT POLE AND HEAD. PROVIDE TYPE 2 DISTRIBUTION. PROVIDE 4" HIGH CONCRETE BASE. REFER TO DETAIL SHEET FOR ADDITIONAL INFORMATION.
5. STANDARD MSU STREET LIGHT WITH TWO ARMS AND TWO HEADS. PROVIDE TYPE 2 DISTRIBUTION. PROVIDE 30" HIGH CONCRETE BASE. REFER TO DETAIL SHEET FOR ADDITIONAL INFORMATION.
6. PROVIDE PULL BOX AND CONDUIT FOR POWER TO FUTURE EV CHARGING STATION. ROUTE (1) 1" CONDUIT WITH PULL STRING UNDERGROUND AND PENETRATE INTO THE BUILDING INTO THE ELECTRICAL VAULT 11. CAP AND LABEL THE CONDUIT "FUTURE EV". MAKE THE PENETRATION INTO THE BUILDING WATER TIGHT. TOP OF THE BOX SHOULD READ "POWER". COORDINATE THE EXACT LOCATION OF THE BOX AND ROUTING OF THE UNDERGROUND CONDUIT DURING CONSTRUCTION.

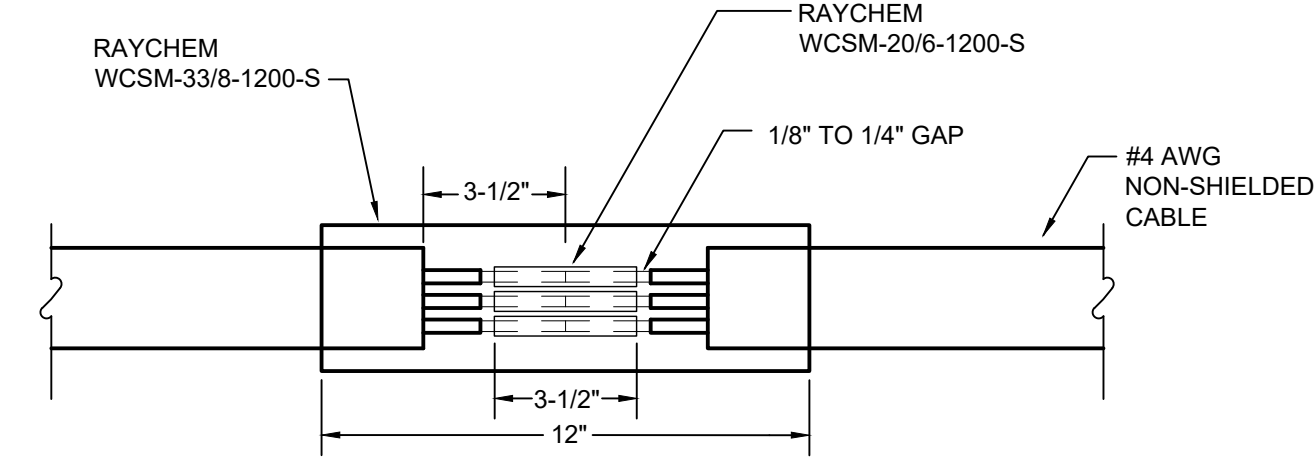
MSU PROJ. NO.	CP23106
PR. MGR.	A. LINEBAUGH
ARCH.	
MECH.	
ELEC.	G. HALSEY
CIVIL	S. LAUGHLIN
L.A.	D. WILBER
INT. DES.	
CONST. REP.	A. LINEBAUGH
APPR.	
DATE	03/12/2024
SCALE	AS NOTED
ISSUED	
CONSTRUCTION	



8 AREA LIGHT WITH PULL BOX  
E101 NOT TO SCALE

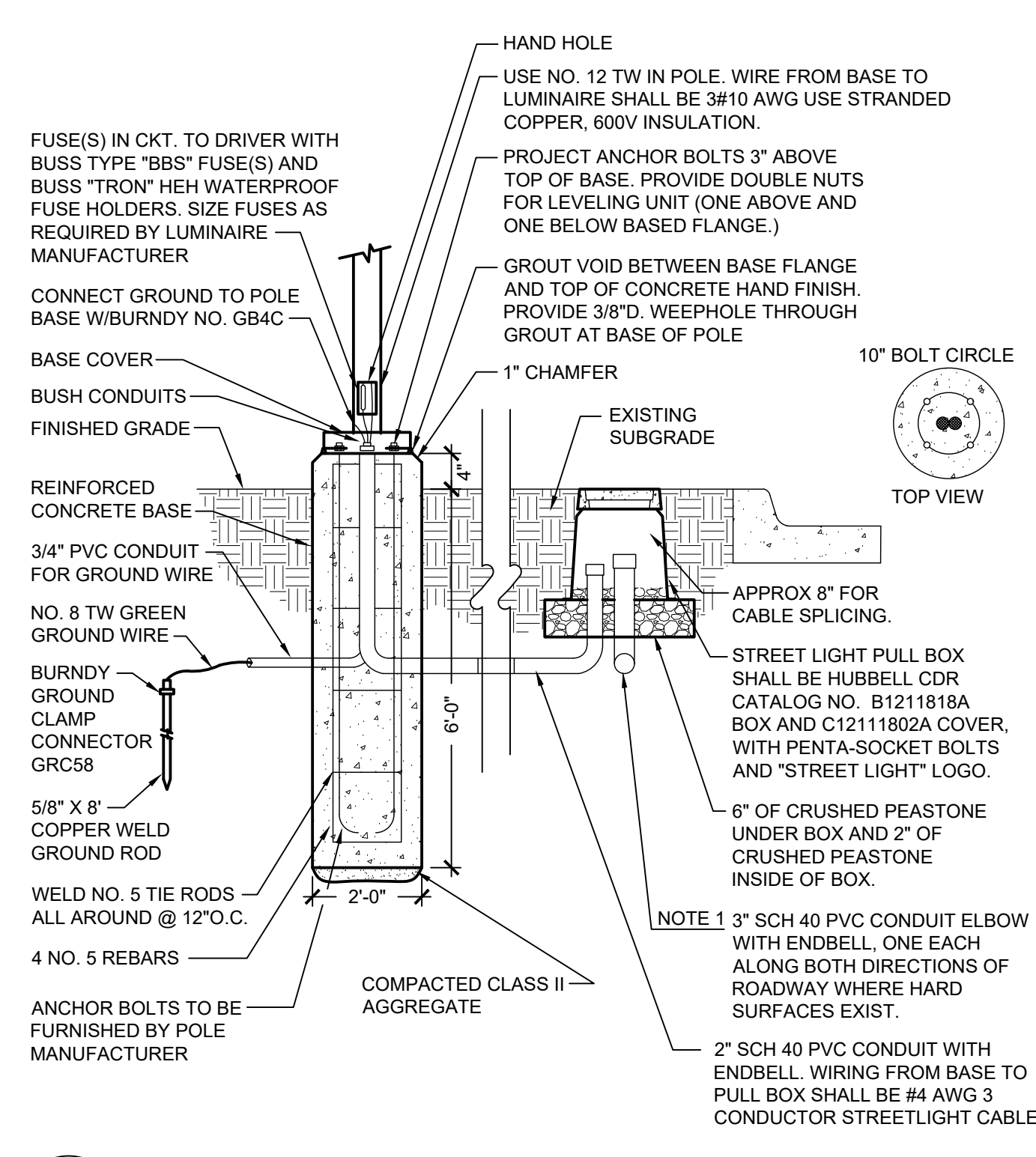


5 TRENCH DETAIL  
E101 NOT TO SCALE



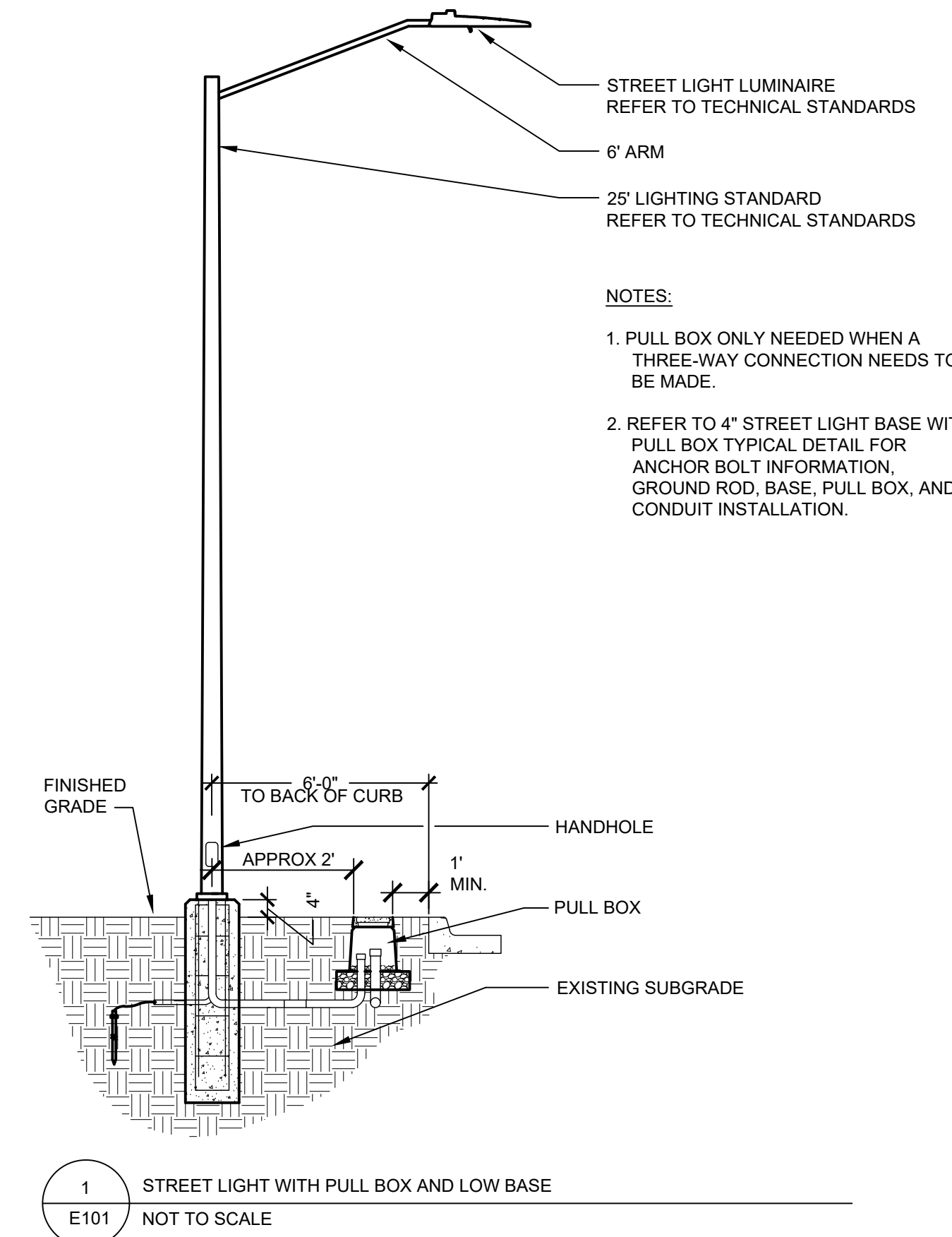
2 STREET LIGHT BASE WITH PULL BOX - 4\"/>

NOTE:  
1. THE 3\"/>



2 STREET LIGHT BASE WITH PULL BOX - 4\"/>

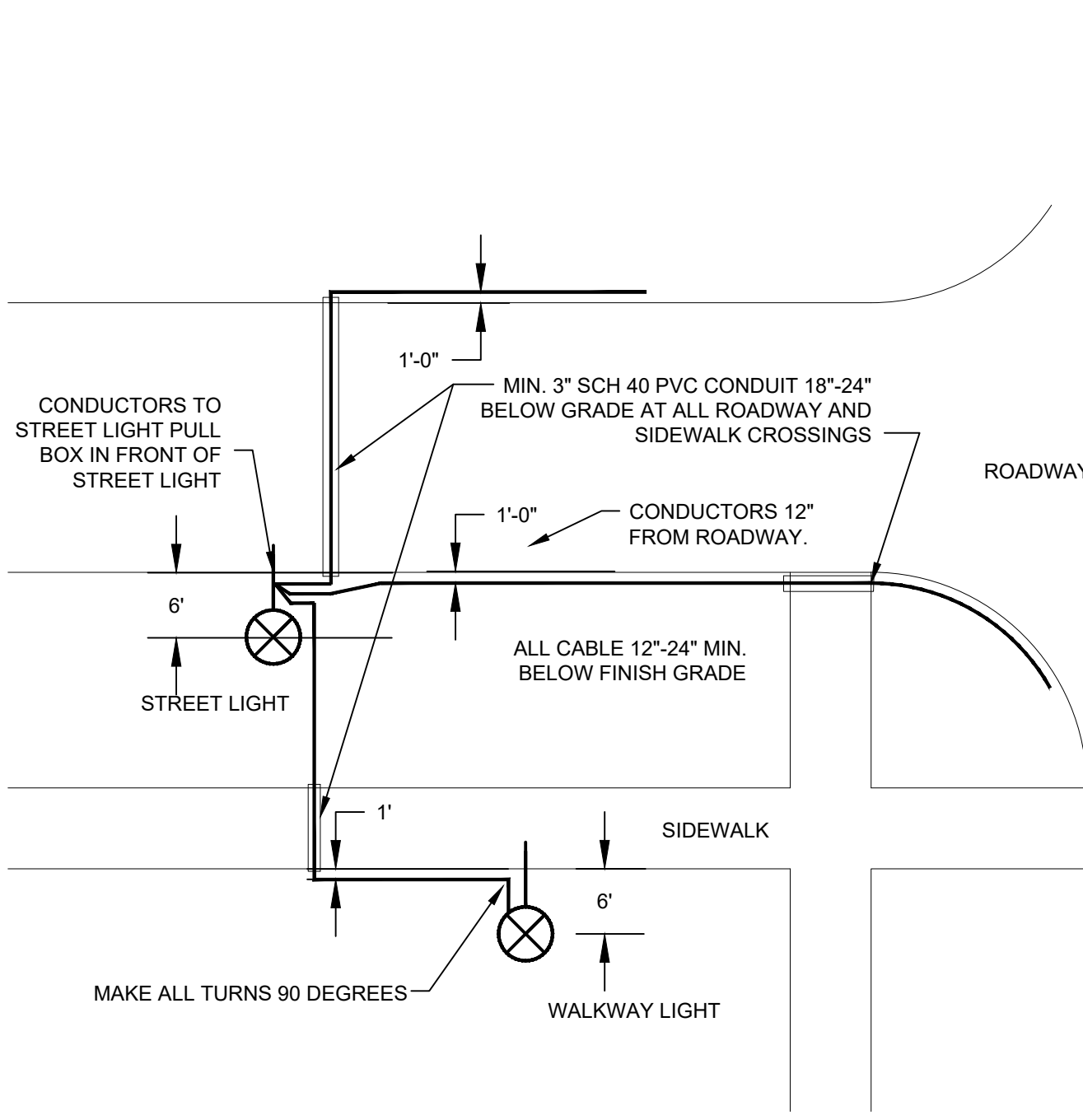
NOTE:  
1. THE 3\"/>



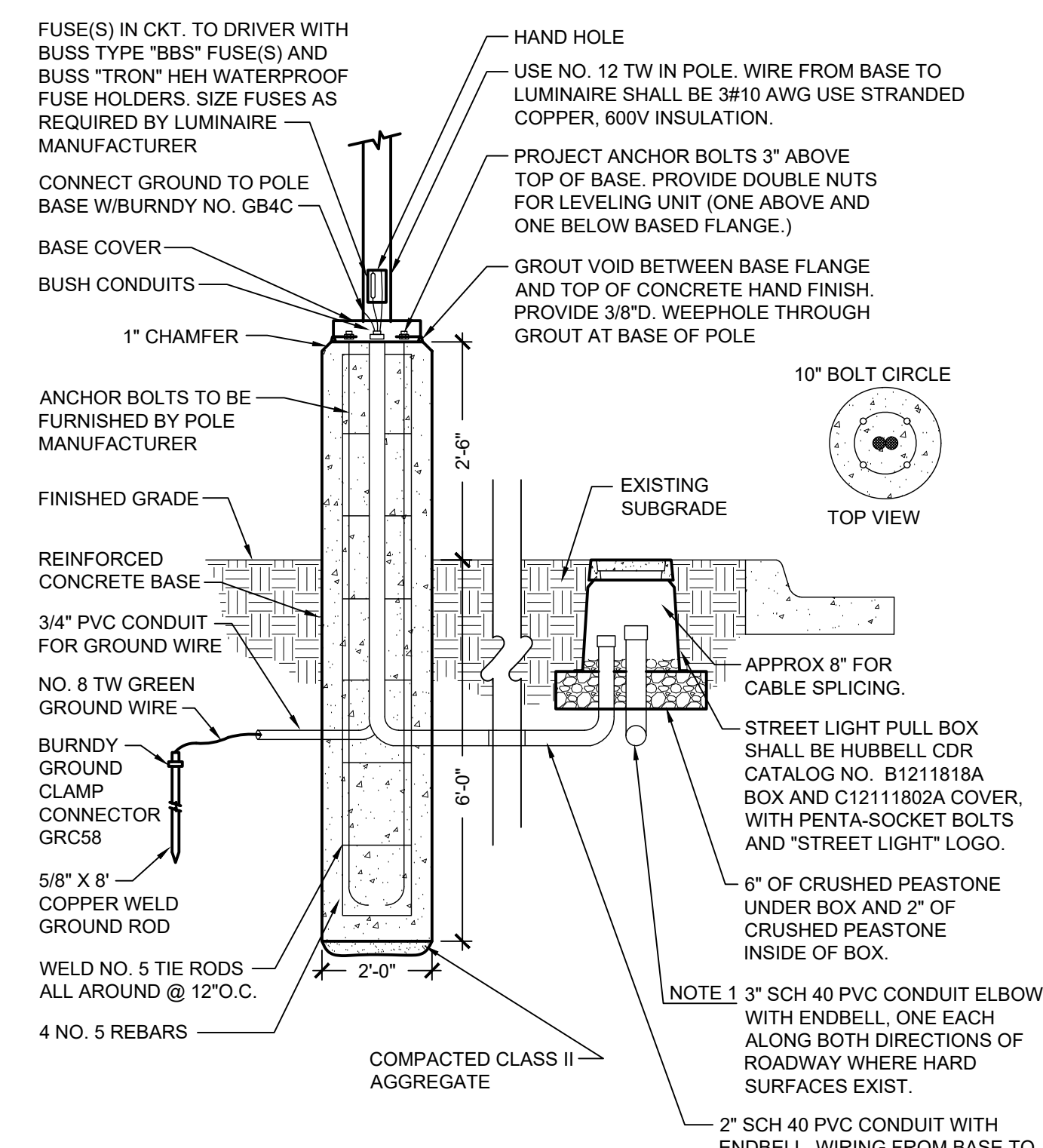
1 STREET LIGHT WITH PULL BOX AND LOW BASE  
E101 NOT TO SCALE

- CABLE SPLICING PROCEDURE:
- FORM CONDUCTORS AND CUT TO LENGTH SO THAT ENDS OF (3) CONDUCTORS TO BE SPLICED MEET WITH NO TENSION.
  - REMOVE 3-1/2\"/>

6 STREET LIGHT CABLE SPLICE  
E101 NOT TO SCALE

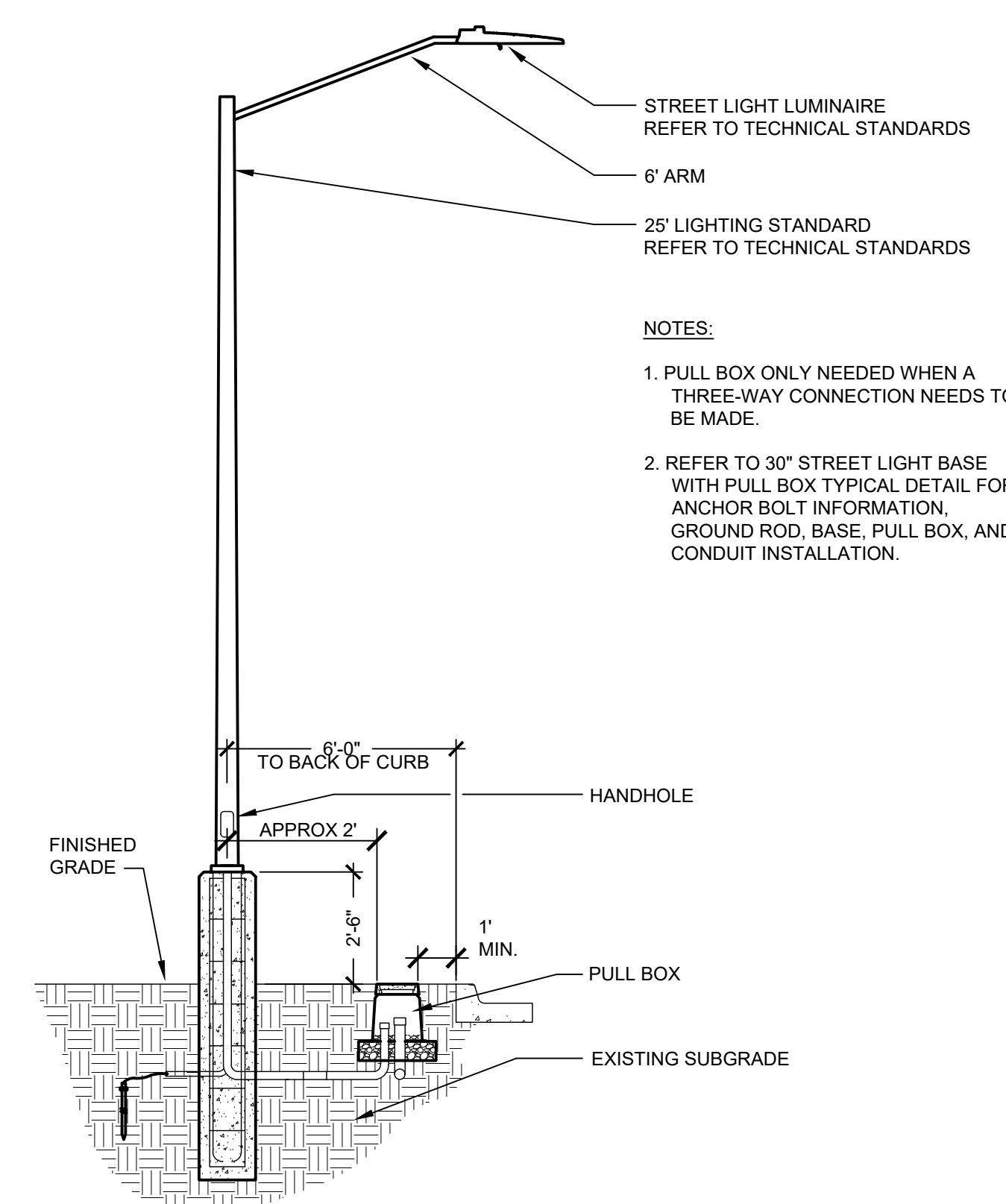


7 SITE LIGHTING TYPICAL CONDUIT ROUTING DETAIL  
E101 NOT TO SCALE

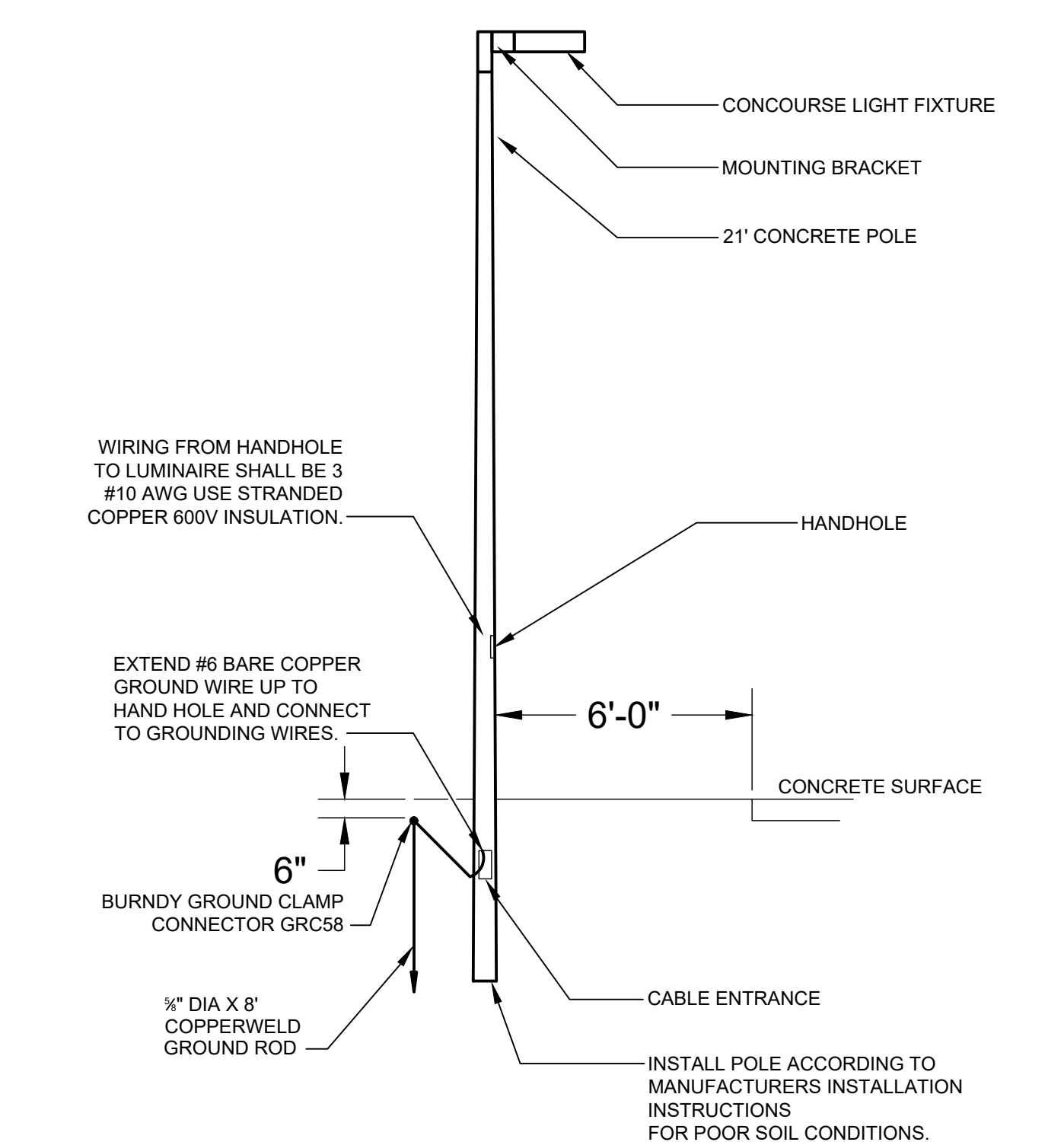


4 STREET LIGHT BASE WITH PULL BOX - 30\"/>

NOTE:  
1. THE 3\"/>



3 STREET LIGHT WITH PULL BOX AND TALL BASE  
E101 NOT TO SCALE



9 AREA LIGHT WITHOUT PULL BOX  
E101 NOT TO SCALE

MSU PROJ. NO.	CP23106
PR. MGR.	A. LINEBAUGH
ARCH.	
MECH.	G. HALSEY
ELEC.	S. LAUGHLIN
CIVIL	D. WILBER
L.A.	
INT. DES.	
CONST. REP.	A. LINEBAUGH
APPR.	
DATE	03/12/2024
SCALE	AS NOTED
ISSUED	
CONSTRUCTION	