

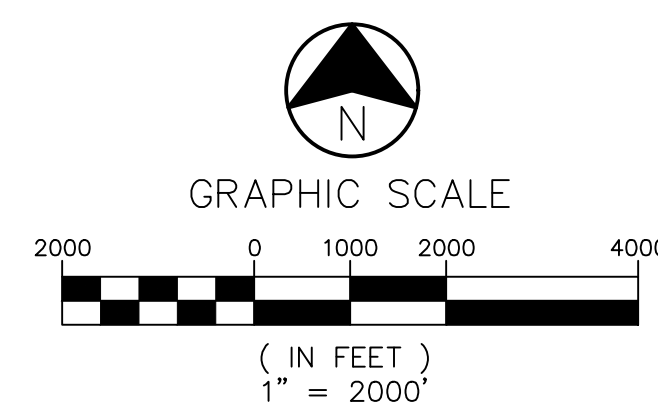
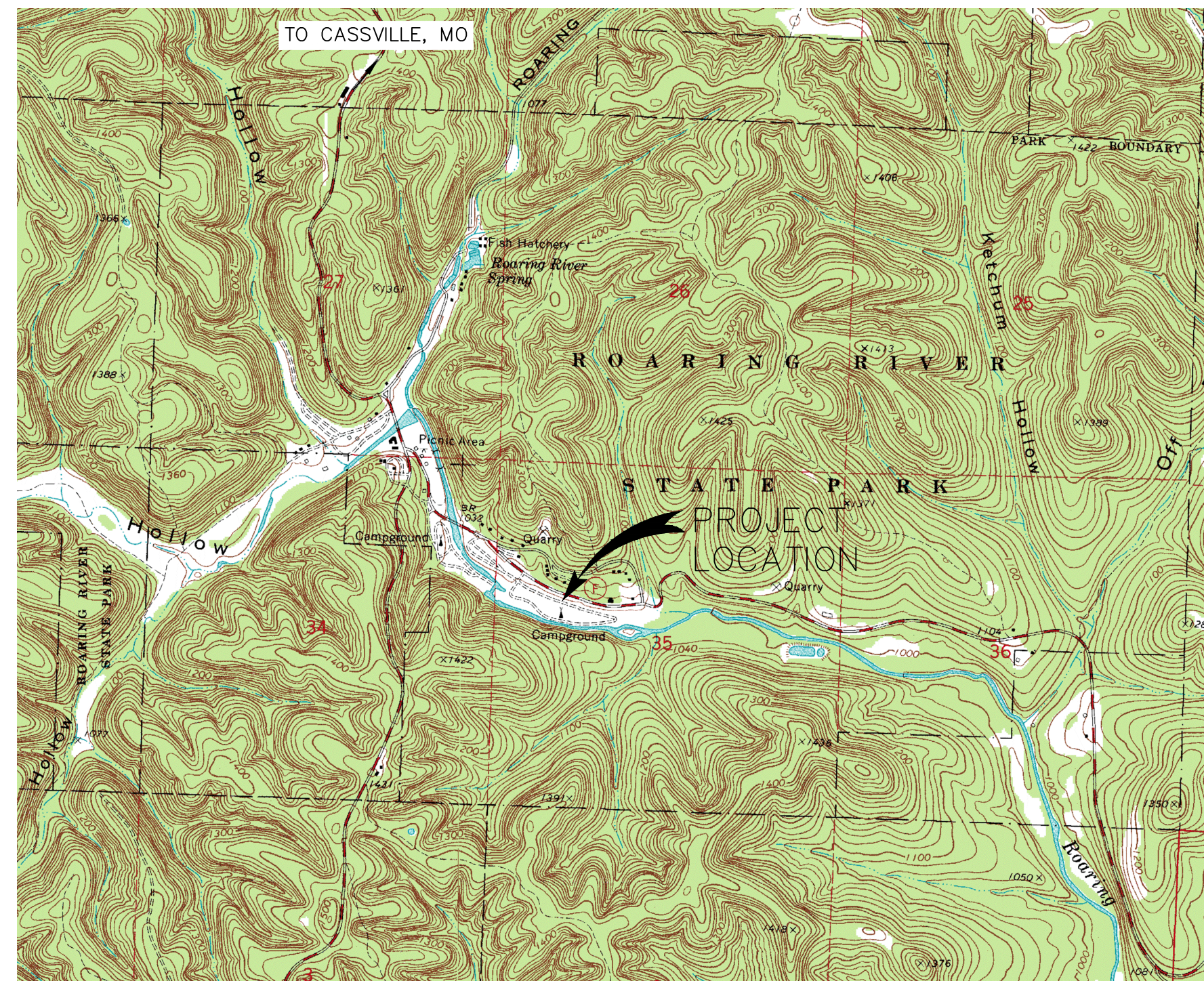
# RENOVATE CAMPGROUND FULL HOOK-UP SITES ROARING RIVER STATE PARK CASSVILLE, MISSOURI



ALLGEIER, MARTIN and ASSOCIATES, INC.

OWNER: STATE OF MISSOURI  
MICHAEL L. PARSON,  
GOVERNOR  
DEPARTMENT OF NATURAL RESOURCES  
MISSOURI STATE PARKS

PROJECT MANAGEMENT: OFFICE OF ADMINISTRATION  
DIVISION OF FACILITIES MANAGEMENT,  
DESIGN AND CONSTRUCTION



DESIGNER: Allgeier Martin & Associates  
7231 East 24th Street Joplin, Missouri 64804  
(417) 680-7200

PROJECT NUMBER: X2205-01

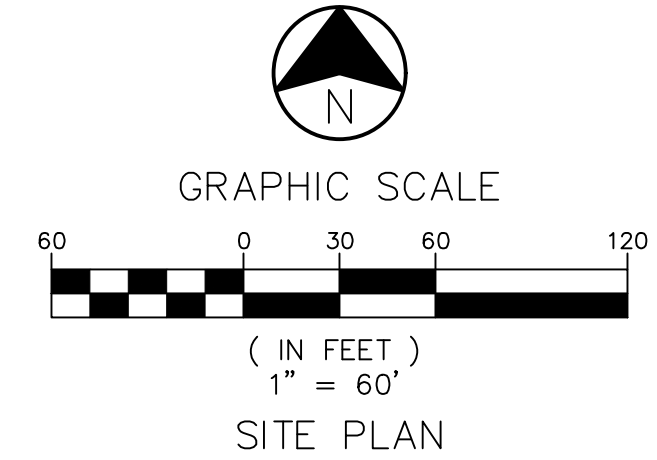
SITE NUMBER: 5309  
ASSET NUMBER: 7815309057



CIVIL ENGINEER: MICHAEL KEATON  
LICENSE NO. PE-2013019060

DRAWING TITLE	INDEX TO DRAWINGS	DWG. NO.
COVER		G-001
SITE PLAN		L-100
EXISTING SITE & DEMOLITION PLAN		C-101
PROPOSED SITE & GRADING PLAN		C-102
PROPOSED SITE & GRADING PLAN		C-103
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SHEET NUMBER:  
**G-001**  
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SEPTEMBER 22, 2023



**LEGEND**

---	EXISTING WATER
---	EXISTING PRESSURE SEWER
---	EXISTING OVERHEAD ELECTRIC
---	EXISTING 1' CONTOUR
---	EXISTING 5' CONTOUR
---	PROPOSED GRAVITY SEWER
---	PROPOSED WATER
---	PROPOSED 1' CONTOUR
---	PROPOSED 5' CONTOUR
⊙	EXISTING CLEANOUT
⊙	EXISTING FIRE HYDRANT
⊙	EXISTING LIGHT POLE
⊙	EXISTING MANHOLE
⊙	EXISTING TREE

**UTILITY CONTACTS**

**ELECTRIC:**  
 GARY PAUL  
 BARRY ELECTRIC COOPERATIVE  
 4015 MAIN STREET  
 CASSVILLE, MO 65625  
 OFFICE PHONE: (417) 847-2131  
 CELL PHONE: (417) 342-1348

**WATER AND SEWER:**  
 ROARING RIVER STATE PARK SUPERINTENDENT  
 ROARING RIVER STATE PARK  
 12716 FARM ROAD 2239  
 CASSVILLE, MO 65625  
 OFFICE PHONE: (417) 847-2539  
 CELL PHONE: (417) 342-5545

**GENERAL NOTES:**

1. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LINE & GRADE STAKES.
2. ALL CONSTRUCTION & EXCAVATION ACTIVITIES SHALL BE CONFINED TO EASEMENTS, ROAD RIGHT-OF-WAY, &/OR WORK AREA LIMITS AS SHOWN ON DRAWINGS.
3. UTILITIES ARE LOCATED ON DRAWINGS BASED UPON INFORMATION BY OTHERS. THE NUMBER & LOCATION OF UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL CONTACT ALL UTILITIES PRIOR TO EXCAVATION, & SHALL BE RESPONSIBLE FOR THE EXACT LOCATION & PRESERVATION OF ALL BURIED UTILITY LINES.
4. CONNECTION DETAILS ARE BASED ON AVAILABLE INFORMATION. CONTRACTOR SHALL BE PREPARED TO ALTER CONNECTIONS & PROVIDE NECESSARY FITTINGS AS FIELD CONDITIONS WARRANT & AS APPROVED BY ENGINEER.
5. SOME ADDITIONAL FITTINGS MAY BE REQUIRED WHICH ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE PREPARED TO FURNISH & INSTALL THESE FITTINGS AS REQUIRED TO MAKE A COMPLETE WORKING SYSTEM. (I.E., BENDS, COUPLINGS, ETC.)
6. THE CONTRACTOR SHALL ARRANGE & PAY FOR ALL MATERIALS TESTING PER THE SPECIFICATIONS.
7. OPEN BURNING WILL NOT BE ALLOWED ONSITE & ALL STUMPS SHALL BE REMOVED FROM SITE.
8. CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITY WITH ALL UTILITY CO.'S & ROARING RIVER STATE PARK.
9. TRAFFIC CONTROL SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE, PLACE AND MAINTAIN ALL BARRIERS (CONES, BARRELS, ETC.) AND SAFETY PERSONNEL (FLAGMEN) AS NECESSARY FOR A SAFE WORKING ENVIRONMENT. ALL SIGNS AND TRAFFIC CONTROL DEVICES SHALL MEET THE REQUIREMENTS OF THE MUTCD. CONTRACTOR SHALL COORDINATE ALL WORK WITH ROARING RIVER STATE PARK.
10. CONTRACTOR SHALL EXERCISE CAUTION TO GUARD AGAINST THE DEGRADATION OF THE WATERS OF THE STATE DUE TO CONSTRUCTION RELATED POLLUTANTS (SILT, DEBRIS, AND PETROLEUM PRODUCTS).
11. IN AREAS WHERE PROPOSED WORK IS PLANNED CLOSE TO EDGE OF ROADWAY, CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS OF ANY DAMAGE OR RUTTING TO EXISTING PAVEMENT MADE BY CONSTRUCTION EQUIPMENT. UPON PROJECT COMPLETION, EXISTING PAVEMENT SHALL BE OF EQUAL TO OR BETTER CONDITION OF THAT IN EXISTENCE PRIOR TO BEGINNING. PAVEMENT REPAIR SHALL ONLY BE PAID FOR DIRECTLY IN AREAS WHERE EXCAVATION IS TO BE UNDERNEATH THE PAVEMENT AND IF THE PAVEMENT MUST BE DISTURBED TO INSTALL IMPROVEMENTS. ANY PAVEMENT DISTURBED DUE TO CONSTRUCTION EQUIPMENT OR OTHER ACTIVITIES SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND NOT BE PAID FOR DIRECTLY. REPAIR OF PAVEMENT DUE TO SUCH INCIDENTAL CONSTRUCTION ACTIVITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER, UNLESS IT IS THE OPINION OF THE ENGINEER THAT THE DAMAGE WAS UNAVOIDABLE DUE TO POOR SOILS OR PAVEMENT CONDITIONS.
12. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.
13. THE MATERIALS & PROPERTIES OF ALL CONCRETE SHALL MEET THE APPLICABLE REQUIREMENTS IN THE ACI MANUAL OF CONCRETE PRACTICE.
14. ALL PAVEMENT ELEVATIONS SHOWN INDICATE TOP OF FINISHED PAVEMENT.
15. FOR THE PURPOSES OF CONTROLLING EROSION AND DISCHARGE OF SEDIMENT FROM PROJECT SITE, CONTRACTOR SHALL PLACE ALL EROSION CONTROL DEVICES PRIOR TO OTHER CONSTRUCTION ACTIVITIES.
16. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL PROVIDE AS-BUILT PLANS IDENTIFYING ALL DEVIATIONS OR VARIATIONS FROM THE ORIGINAL PLANS.
17. ALL EXCAVATION SHALL BE CONSIDERED UNCLASSIFIED.
18. ALL AREAS OF THE PEDESTRIAN ACCESS ROUTE MUST BE COMPLIANT WITH THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG)". EXCEPTIONS MUST BE APPROVED BY THE ENGINEER. ALL OTHER AREAS OF (NON-COMPLIANCE) SHALL BE REMOVED AND CORRECTED AT THE CONTRACTOR'S EXPENSE
19. THE CONTRACTOR SHALL NOT CHANGE OR DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE OWNER AND ENGINEER.
20. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL PERMITS AND PAY ALL FEES AS REQUIRED BY THE CONSTRUCTION COVERED IN THESE PLANS.
21. ALL WORK AND MATERIALS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE OWNER OR THE OWNERS REPRESENTATIVE.
22. ANY ESTIMATES OF QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR AND SUBCONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ALL QUANTITIES. CONTRACTOR SHALL PROVIDE ALL WORK AND MATERIALS AS SHOWN ON PLANS.
23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE PUBLIC AND CAMPGROUND ROADS IN THE VICINITY OF THE JOB SITE CLEAN AND FREE OF ROCKS, SOIL AND DEBRIS.
24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RESTORATION OF THE TURF AREAS AND FOR DAMAGED IMPROVEMENTS SUCH AS PAVEMENT AND UTILITIES. DAMAGE IMPROVEMENTS SHALL BE REPAIRED IN CONFORMANCE WITH THE LATEST STATE STANDARDS AND THE STATES SATISFACTION.
25. CONTRACTOR AND SUBCONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ALL EARTHWORK QUANTITIES. CONTRACTOR SHALL PROVIDE ALL WORK AND MATERIALS AS SHOWN ON PLANS.
26. THE CONTRACTOR IS RESPONSIBLE FOR ATTENDING TO AND CORRECTING UNSUITABLE SOIL CONDITIONS RELATED TO PLOW ZONES, WET SOILS AND OTHER CONDITIONS. THE UNSUITABLE CONDITIONS MUST BE CORRECTED PER THE GEOTECHNICAL ENGINEER'S REPORT, WHERE REQUIRED, TO MEET PROJECT NEEDS.
27. CONTRACTOR SHALL UTILIZE PRIVATE UTILITY LOCATOR TO LOCATE AND WORK EXISTING UTILITIES WITHIN THE PROJECT AREA. CONTRACTOR IS RESPONSIBLE FOR ALL COSTS AND COORDINATION ASSOCIATED WITH THIS.

STATE OF MISSOURI  
 MICHAEL L. PARSON,  
 GOVERNOR



CIVIL ENGINEER: MICHAEL KEATON  
 LICENSE NO. PE-2013019060



ALLGEIER, MARTIN and ASSOCIATES, INC.  
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 121 EAST 24TH STREET, JOPLIN, MISSOURI 64501-1600

OFFICE OF ADMINISTRATION  
 DIVISION OF FACILITIES  
 MANAGEMENT,  
 DESIGN AND CONSTRUCTION

DEPARTMENT OF  
 NATURAL RESOURCES  
 MISSOURI STATE PARKS

RENOVATE CAMPGROUND  
 FULL HOOK-UP SITES

ROARING RIVER  
 STATE PARK  
 12716 FARM ROAD 2239  
 CASSVILLE, MISSOURI

PROJECT # X2205-01  
 SITE # 5309  
 ASSET # 7815309057

REVISION: \_\_\_\_\_  
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 REVISION: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 ISSUE DATE: \_\_\_\_\_

CAD DWG FILE: \_\_\_\_\_  
 DRAWN BY: AWW  
 CHECKED BY: MCK  
 DESIGNED BY: MCK

SHEET TITLE:  
**SITE PLAN**

SHEET NUMBER:

**L-100**

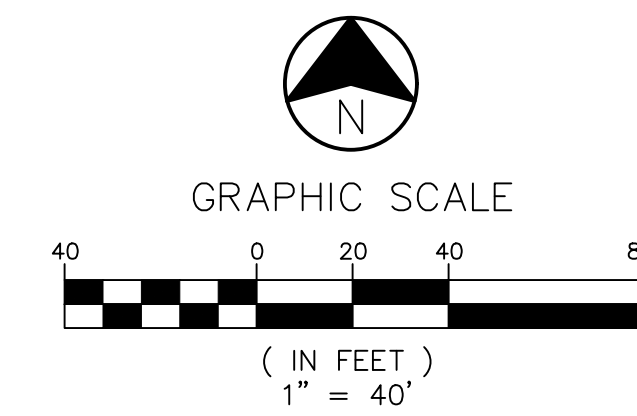
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**LEGEND**

- UTILITY TO BE REMOVED
- TREE TO BE PROTECTED
- TREE TO BE REMOVED
- REMOVE ASPHALT FOR UTILITIES
- REMOVE CONCRETE OR ASPHALT
- LINEAR ITEMS TO BE REMOVED



**NOTES:**

1. EXISTING TREES SHALL BE PRESERVED WHERE POSSIBLE.
2. ALL EXISTING SITE AMENITIES (LANTERN POSTS, ELECTRICAL PEDESTALS, GRILL/FIRE PIT, CAMPSITE MARKERS, ETC.) SHALL BE REMOVED & DISPOSED OF BY THE CONTRACTOR. PICNIC TABLES WILL BE RETAINED BY THE OWNER PRIOR TO STARTING CONSTRUCTION.
3. ALL CONCRETE & ASPHALT CAMPSITES, PICNIC TABLE PADS, ETC. WITHIN THE PROJECT LIMITS SHALL BE REMOVED & PROPERLY DISPOSED OF BY THE CONTRACTOR UNLESS OTHERWISE NOTED. EXISTING ASPHALT MAY BE RUBBLEZIED AND INCORPORATED INTO CONTROLLED FILLS AT THE CONTRACTOR'S OPTION. SEE GEOTECHNICAL REPORT FOR DETAILS.
4. EXISTING ELECTRICAL PEDESTAL SHALL BE DISCONNECTED & REMOVED.
5. EXISTING SANITARY SEWER CLEANOUTS SHALL BE CAPPED 2'-0" (MIN.) BELOW FINISH GRADE & ABANDONED.
6. EXISTING HYDRANTS TO BE REMOVED. CAP SERVICE LINES BELOW GRADE AT VALVE PIT. SALVAGE HYDRANTS TO OWNER.
7. ALL SITE AMENITIES THAT ARE IN GOOD CONDITION TO BE SALVAGED TO OWNER, INCLUDING ALL ELECTRIC PEDESTALS.

STATE OF MISSOURI  
MICHAEL L. PARSON,  
GOVERNOR



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OFFICE OF ADMINISTRATION  
DIVISION OF FACILITIES  
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DESIGN AND CONSTRUCTION

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DATE: \_\_\_\_\_

ISSUE DATE: \_\_\_\_\_

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: AWW  
CHECKED BY: MCK  
DESIGNED BY: MCK

SHEET TITLE:

**EXISTING SITE &  
DEMOLITION PLAN**

SHEET NUMBER:

**C-101**

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SEPTEMBER 22, 2023



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DATE: \_\_\_\_\_  
ISSUE DATE: \_\_\_\_\_

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DRAWN BY: AWW  
CHECKED BY: MCK  
DESIGNED BY: MCK

SHEET TITLE:  
**PROPOSED SITE &  
GRADING PLAN**

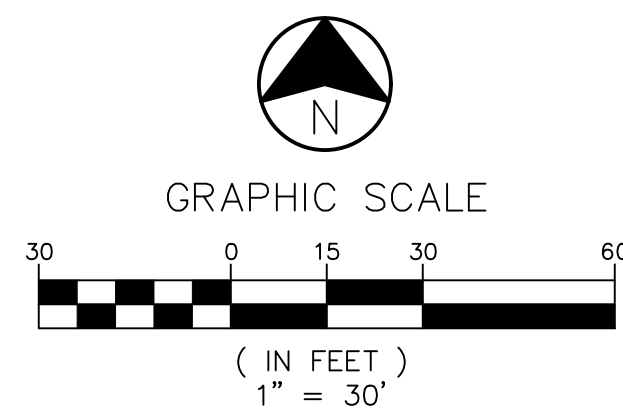
SHEET NUMBER:

**C-102**

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**\*CAUTION\***  
CONTRACTOR SHALL POT HOLE AND  
VERIFY DEPTH OF EXISTING WATERLINES  
AND PRESSURE SEWER PRIOR TO  
EXCAVATION. MAINTAIN MINIMUM 30" OF  
COVER OVER EXISTING LINES



**NOTES:**

1. CAMPSITES ARE STANDARD SIZE UNLESS NOTED OTHERWISE.
2. HOST SITES 1 & 32 SHALL BE CONSTRUCTED TO ACCESSIBLE STANDARDS WITH EXCEPTION TO THE ELECTRICAL PEDESTAL, WHICH SHALL BE ELEVATED ACCORDING TO THE TABLE ON E-201. HOST SITES SHALL NOT BE MARKED AS ACCESSIBLE.
3. REFER TO SHEETS C-104 & C-105 FOR ROADWAY PLAN & PROFILE.
4. ALL DISTURBED AREAS THAT ARE NOT PAVED SHALL RECEIVE A MINIMUM OF 6" TOPSOIL & SHALL BE SEEDED, FERTILIZED, & MULCHED ACCORDING TO THE SPECIFICATIONS. GRASS SEED WILL BE FURNISHED BY THE OWNER & SHALL BE INSTALLED BY THE CONTRACTOR.
5. PROJECT AREA IS EXTREMELY FLAT. THEREFORE, CARE SHALL BE TAKEN TO SET AND FINISH GRADES TO PROMOTE DRAINAGE OF ALL AREAS.
6. IN ADDITION TO THOSE DESIGNATED, EXISTING TREES SHALL BE PRESERVED WHEREVER POSSIBLE.
7. REFER TO STAKING PLANS FOR SPOT ELEVATIONS.



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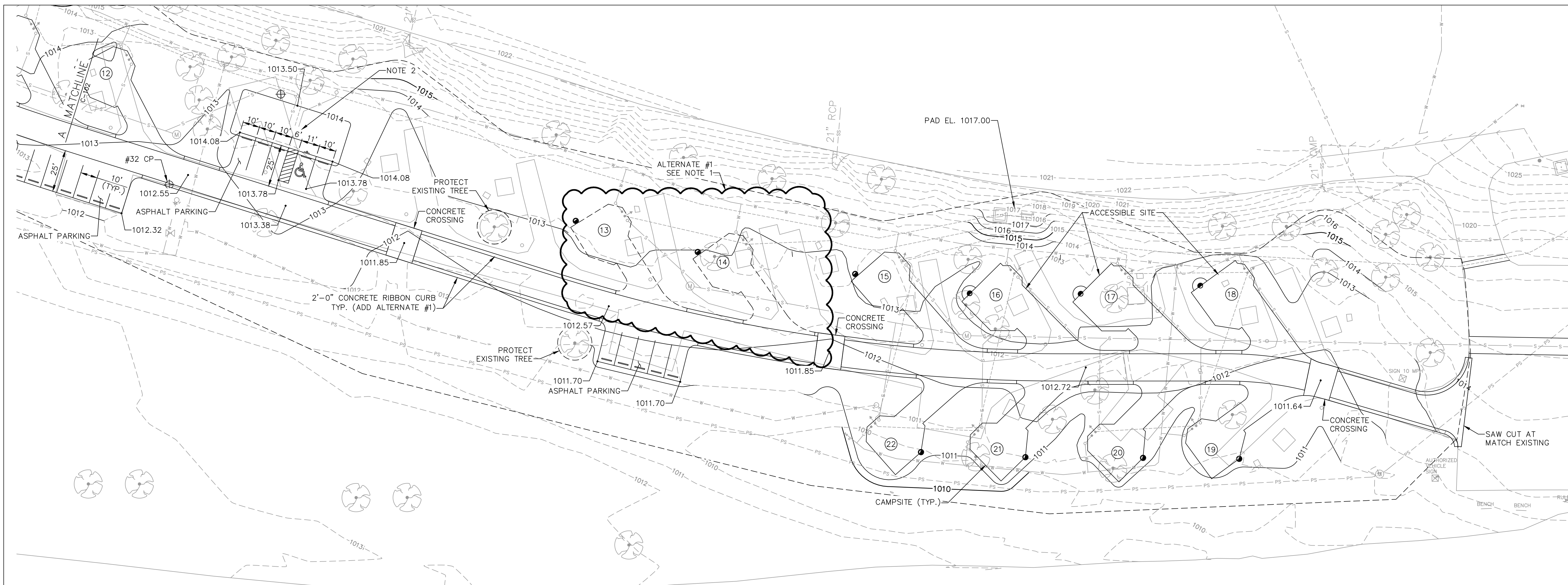
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DRAWN BY: AWW  
CHECKED BY: MCK  
DESIGNED BY: MCK

SHEET TITLE:  
**PROPOSED SITE &  
GRADING PLAN**

SHEET NUMBER:

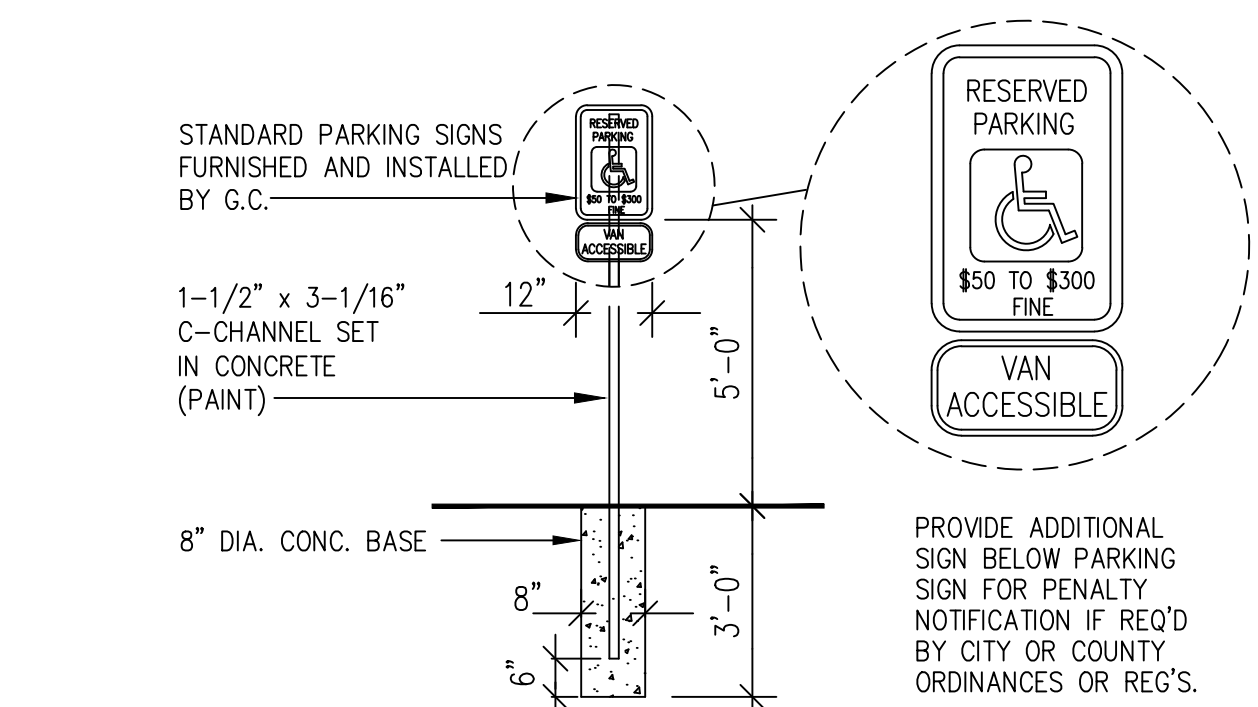
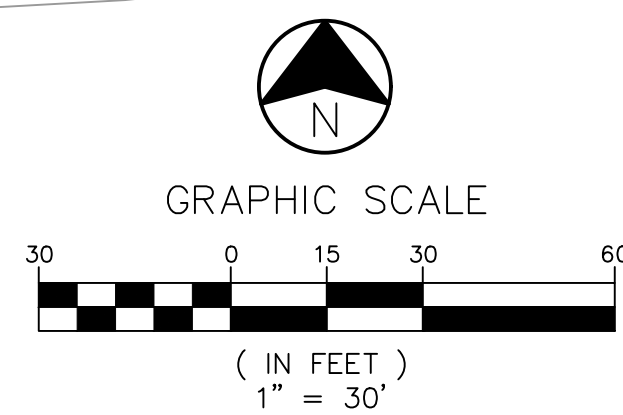
**C-103**

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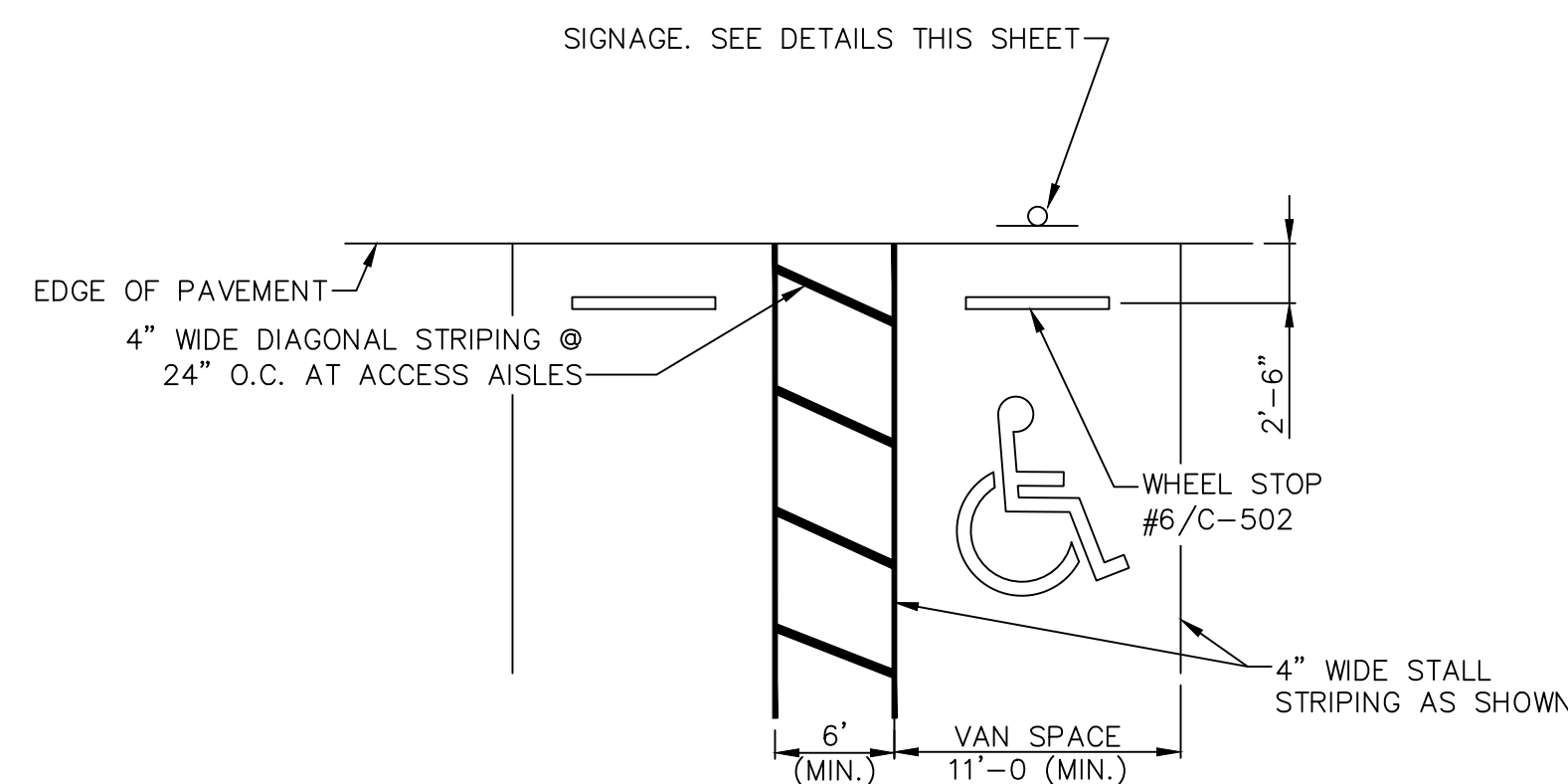
**NOTES:**

- CAMPSITES 13 & 14 ARE INCLUDED IN ADD ALTERNATE #1. ADD ALTERNATE #1 INCLUDES ALL AGG. BASE, CONCRETE, SITE AMENITIES, AND UTILITIES TO SITES 13 & 14. REFER TO UTILITY SHEETS FOR DETAILS ON WATER, SEWER & ELECTRIC FOR ADD ALTERNATE #1.
- EARTHWORK FOR FUTURE SHOWER HOUSE TO BE PER GEOTECH REPORT.
- REFER TO STAKING PLANS FOR SPOT ELEVATIONS.



NOTE: PROVIDE AND INSTALL 12" X 18" PAINTED SIGN WITH ACCESSIBLE LOGO AND LETTERS "VAN ACCESSIBLE" AS INDICATED. MOUNT SIGN ON METAL STANDARD. SIGN TO BE LOCATED AS INDICATED ON DRAWINGS. IF NOT INDICATED AS FOLLOWS:  
AT LOCATIONS WHERE WALKWAY ALONG FRONT EDGE OF PARKING STALL - SET SIGN AT CENTERLINE OF STALL SET AT OPPOSITE SIDE OF WALK.  
AT LOCATIONS WHERE NO WALK ALONG FRONT EDGE OF PARKING SET SIGN AT MIN. 2'-6" FROM CURB OR PARKING BUMPER, AND CENTERED IN STALL WIDTH.  
AT INSTALLATIONS OF MULTIPLE SIGNS IN A ROW ALIGN SIGNS IN A EVEN ROW AND SET SIGN AT HEIGHT SHOWN AND ALIGN ALL ADJACENT SIGNAGE HORIZONTALLY, MAINTAIN MAX. HEIGHT UNLESS NOTED OTHERWISE.

**1 HANDICAP ACCESSIBLE SIGN DETAIL**  
C-103 NTS



- NOTE:**
- MAX. SLOPE AT ALL ACCESSIBLE PARKING SPACES TO BE 1:48 BOTH DIRECTIONS.
  - HANDICAP SYMBOL SHALL BE PAINTED PER INDUSTRY STANDARDS.

**2 TYPICAL ACCESSIBLE PARKING DETAIL**  
C-103 NTS



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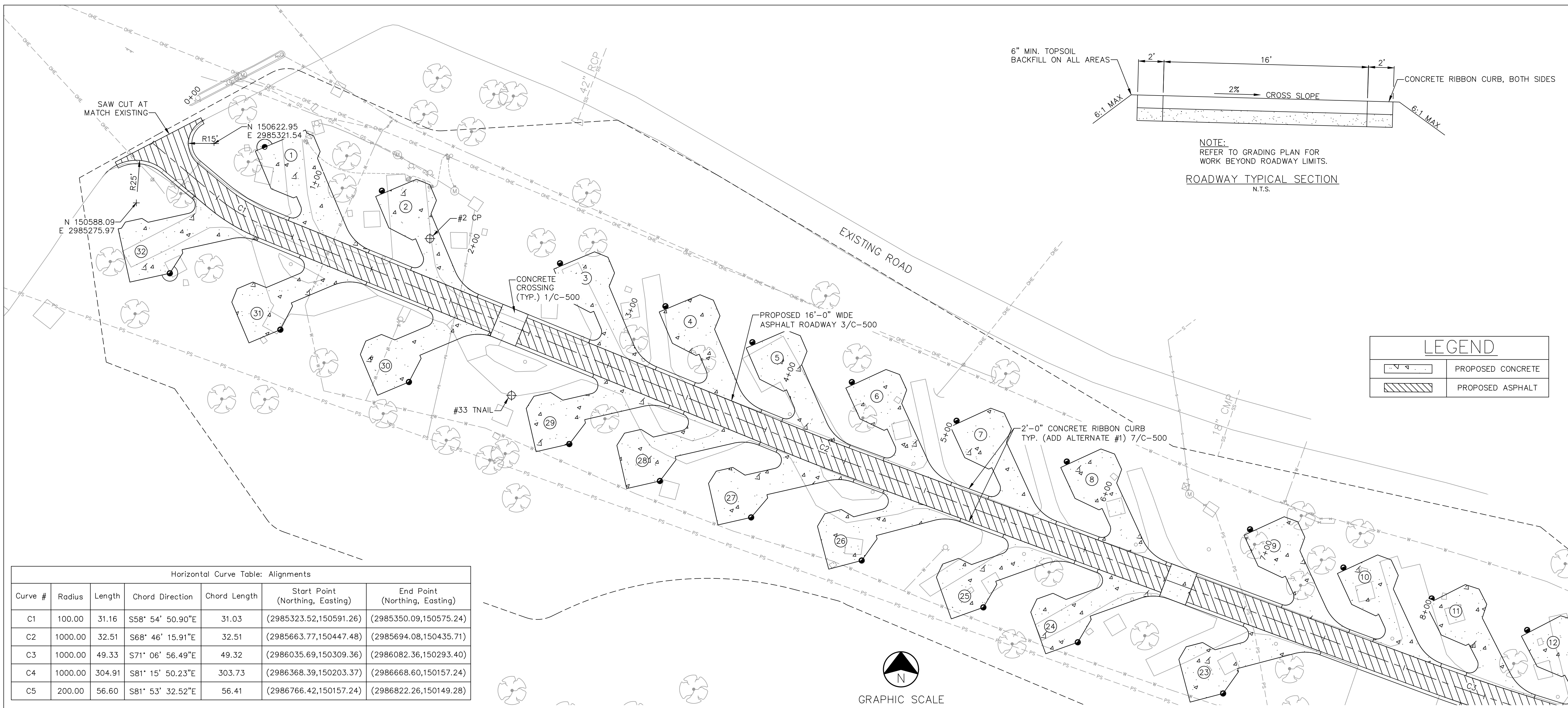
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CHECKED BY: MCK  
DESIGNED BY: MCK

SHEET TITLE:  
**ROADWAY PLAN &  
PROFILE**

SHEET NUMBER:

**C-104**

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SEPTEMBER 22, 2023

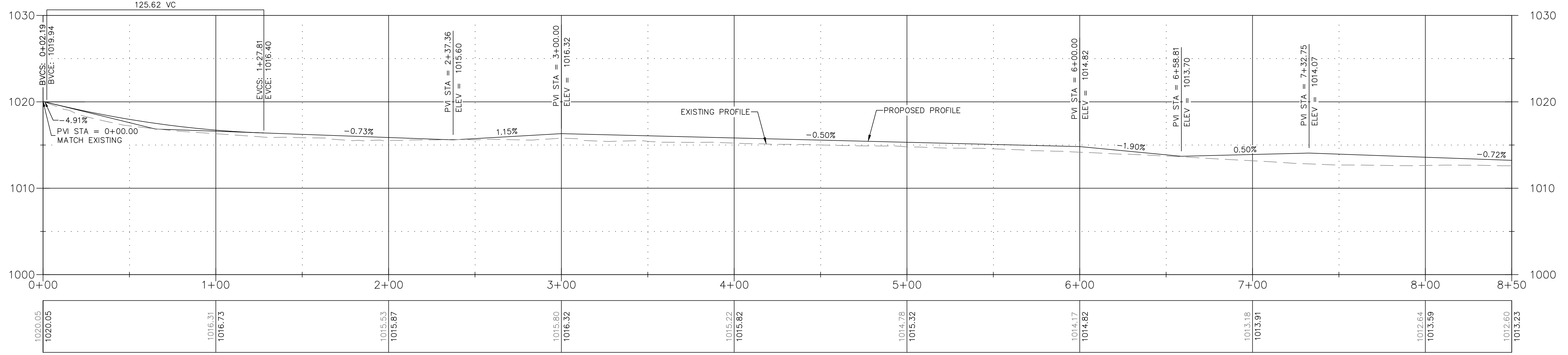
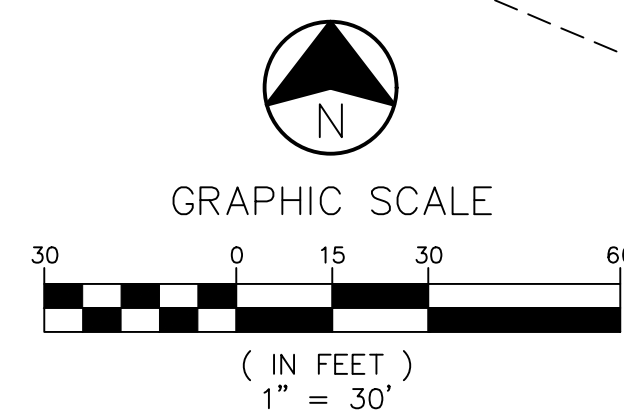


Horizontal Curve Table: Alignments

Curve #	Radius	Length	Chord Direction	Chord Length	Start Point (Northing, Easting)	End Point (Northing, Easting)
C1	100.00	31.16	S58° 54' 50.90"E	31.03	(2985323.52,150591.26)	(2985350.09,150575.24)
C2	1000.00	32.51	S68° 46' 15.91"E	32.51	(2985663.77,150447.48)	(2985694.08,150435.71)
C3	1000.00	49.33	S71° 06' 56.49"E	49.32	(2986035.69,150309.36)	(2986082.36,150293.40)
C4	1000.00	304.91	S81° 15' 50.23"E	303.73	(2986368.39,150203.37)	(2986668.60,150157.24)
C5	200.00	56.60	S81° 53' 32.52"E	56.41	(2986766.42,150157.24)	(2986822.26,150149.28)

LOW POINT EL. = 1016.40  
LOW POINT STA = 1+27.81  
PVI STA = 0+65.00  
PVI EL. = 1016.85  
A.D. = 4.19%  
K = 30.00  
125.62 VC

NOTE:  
SEE SHEET C-109 FOR CONTROL POINT INFORMATION.



Centerline Road  
1:30



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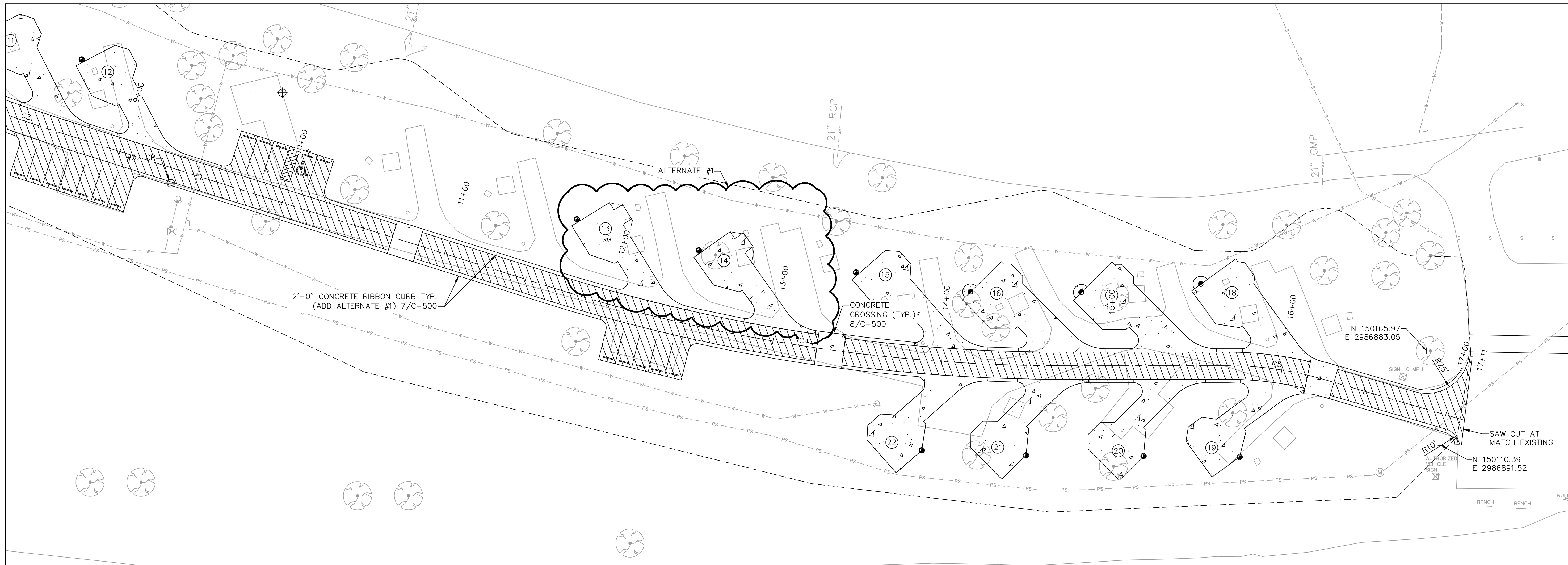
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DESIGNED BY: MCK

SHEET TITLE:  
**ROADWAY PLAN &  
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SHEET NUMBER:

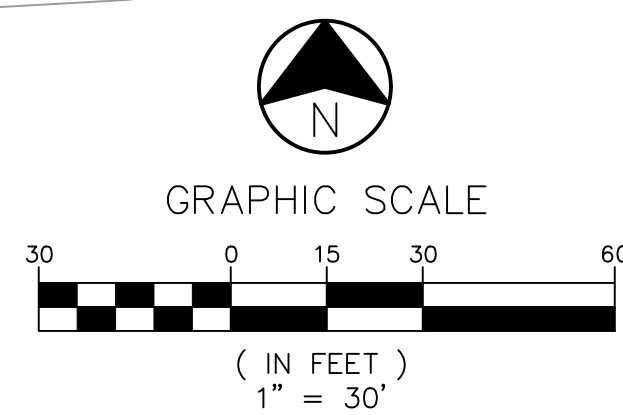
**C-105**

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SEPTEMBER 22, 2023

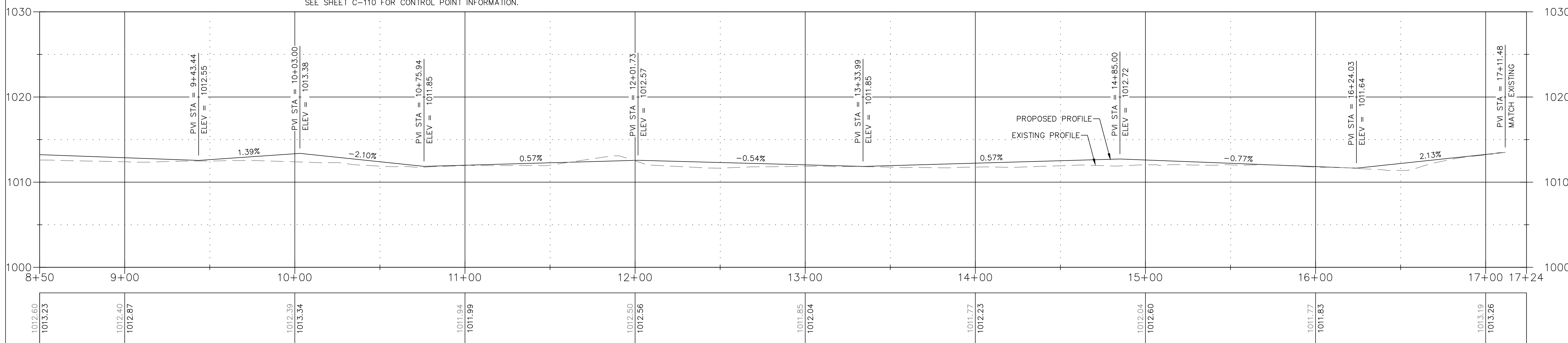


Horizontal Curve Table: Alignments						
Curve #	Radius	Length	Chord Direction	Chord Length	Start Point (Northing, Easting)	End Point (Northing, Easting)
C1	100.00	31.16	S58° 54' 50.90"E	31.03	(2985323.52,150591.26)	(2985350.09,150575.24)
C2	1000.00	32.51	S68° 46' 15.91"E	32.51	(2985663.77,150447.48)	(2985694.08,150435.71)
C3	1000.00	49.33	S71° 06' 56.49"E	49.32	(2986035.69,150309.36)	(2986082.36,150293.40)
C4	1000.00	304.91	S81° 15' 50.23"E	303.73	(2986368.39,150203.37)	(2986668.60,150157.24)
C5	200.00	56.60	S81° 53' 32.52"E	56.41	(2986766.42,150157.24)	(2986822.26,150149.28)

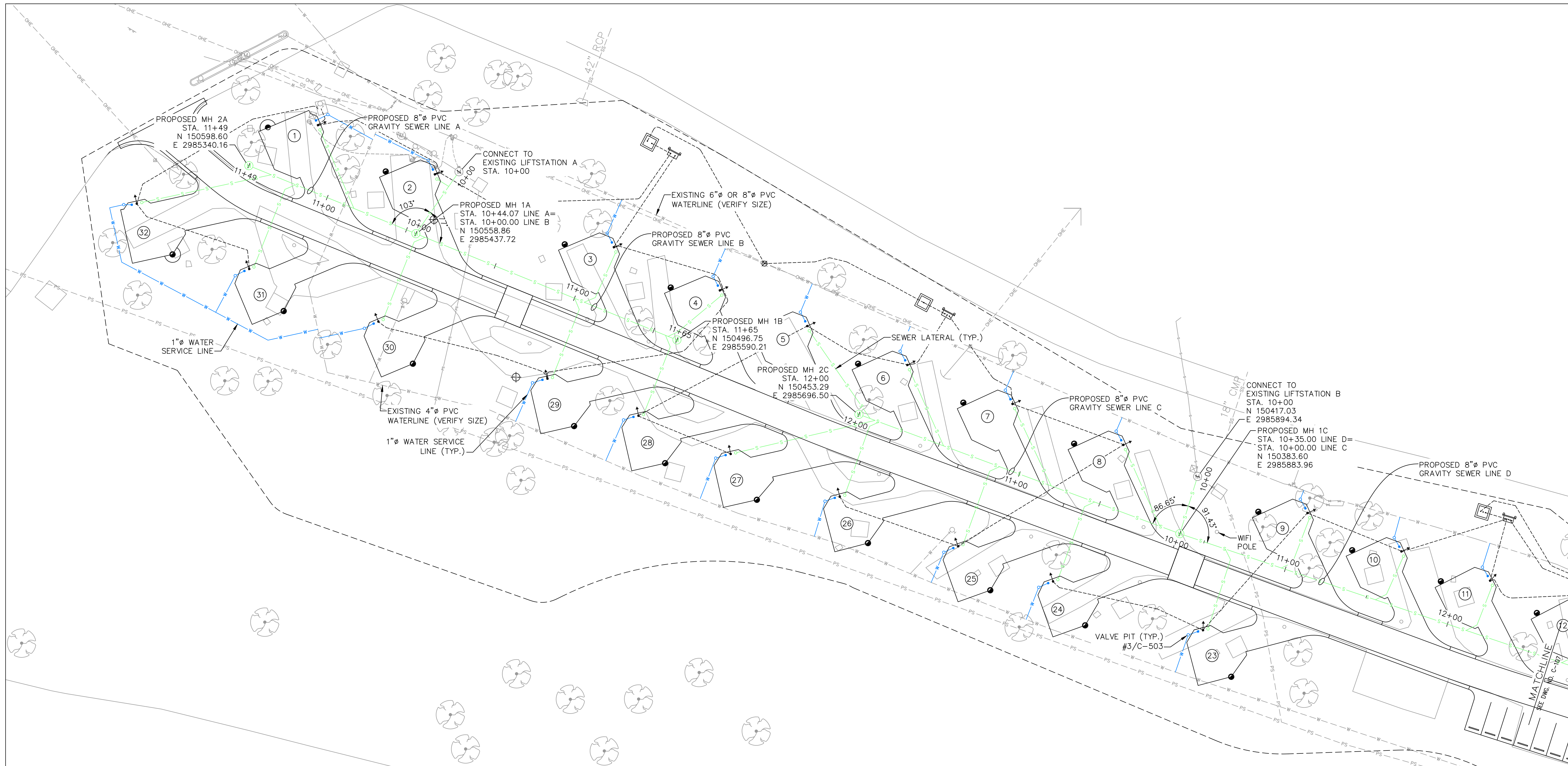
NOTE:  
SEE SHEET C-110 FOR CONTROL POINT INFORMATION.



LEGEND	
	PROPOSED ASPHALT
	PROPOSED CONCRETE

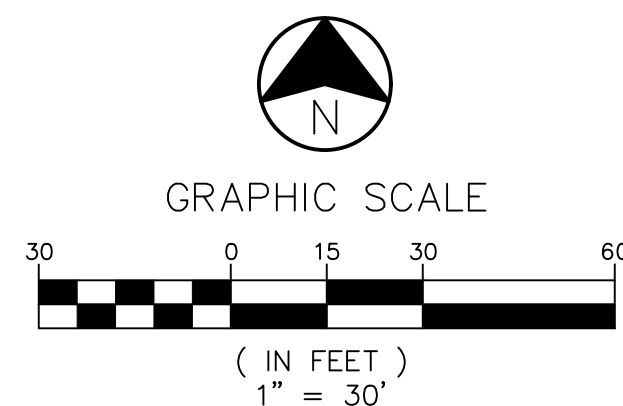


Centerline Road  
1:30



**NOTES:**

1. CONTRACTOR SHALL VERIFY ALL EXISTING WATERLINE SIZES PRIOR TO ORDERING MATERIALS.
2. ALL WATERLINES SHALL BE BURIED A MINIMUM 3'-0" DEEP TO TOP OF PIPE
3. ALL WATER SERVICE TAPS SHALL BE LIVE, UNLESS OTHERWISE NOTED.
4. EXISTING LIFT STATIONS SHALL BE NEATLY CORE DRILLED. THE GAPS AROUND THE GRAVITY SEWER PIPE SHALL BE SEALED WATER TIGHT WITH A NON-SHRINK GROUT FOR CONCRETE (LIFTSTATION C).
5. FIBERGLASS BASINS (LIFTSTATIONS A & B) SHALL UTILIZE A BOLT ON RUBBER GROMMET FOR PIPE CONNECTION.



CIVIL ENGINEER: MICHAEL KEATON  
LICENSE NO. PE-2013019060



ALLGIEIER, MARTIN and ASSOCIATES, INC.  
CONSULTING ENGINEERS and SURVEYORS  
221 EAST 500 STREET, JOPLIN, MISSOURI 64501-1000

OFFICE OF ADMINISTRATION  
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DEPARTMENT OF  
NATURAL RESOURCES  
MISSOURI STATE PARKS

RENOVATE CAMPGROUND  
FULL HOOK-UP SITES

ROARING RIVER  
STATE PARK  
12716 FARM ROAD 2239  
CASSVILLE, MISSOURI

PROJECT # X2205-01  
SITE # 5309  
ASSET # 7815309057

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: \_\_\_\_\_

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: AWW  
CHECKED BY: MCK  
DESIGNED BY: MCK

SHEET TITLE:  
**PROPOSED  
SEWER & WATER  
PLAN**

SHEET NUMBER:

**C-106**





CIVIL ENGINEER: MICHAEL KEATON  
LICENSE NO. PE-2013019060



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221 EAST 400 STREET, JOPLIN, MISSOURI 64801-1000

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REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: \_\_\_\_\_

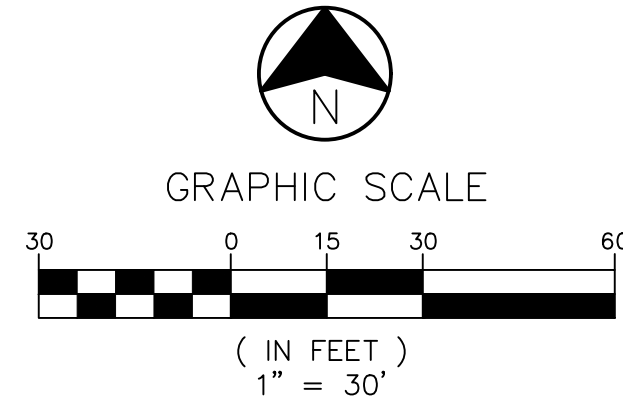
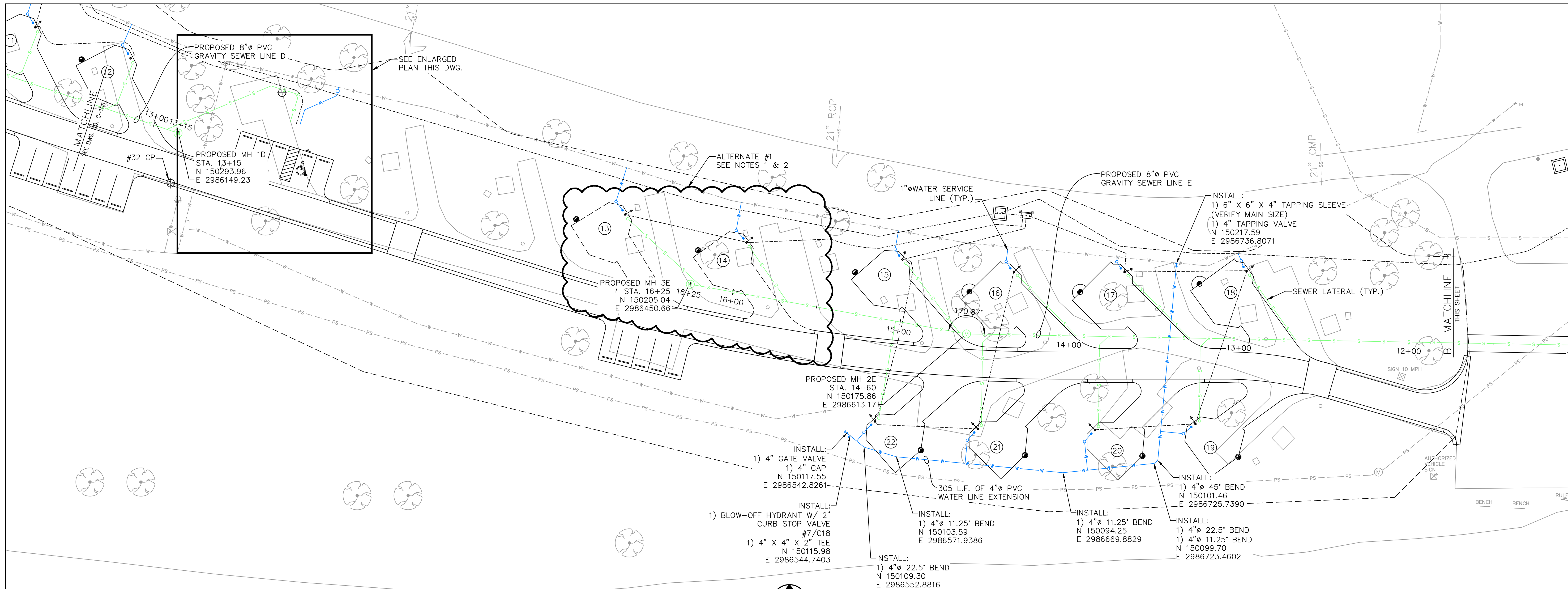
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DRAWN BY: AWW  
CHECKED BY: MCK  
DESIGNED BY: MCK

SHEET TITLE:  
**PROPOSED  
SEWER & WATER  
PLAN**

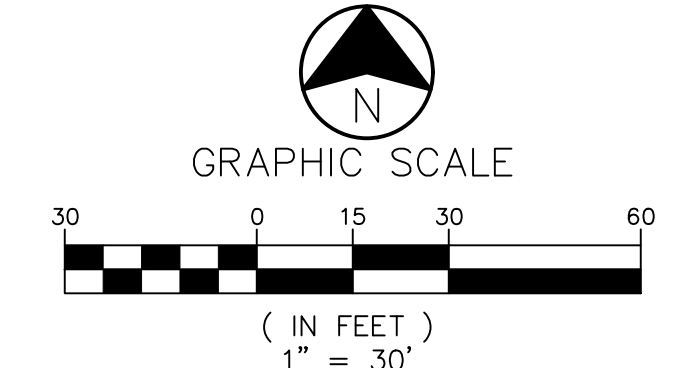
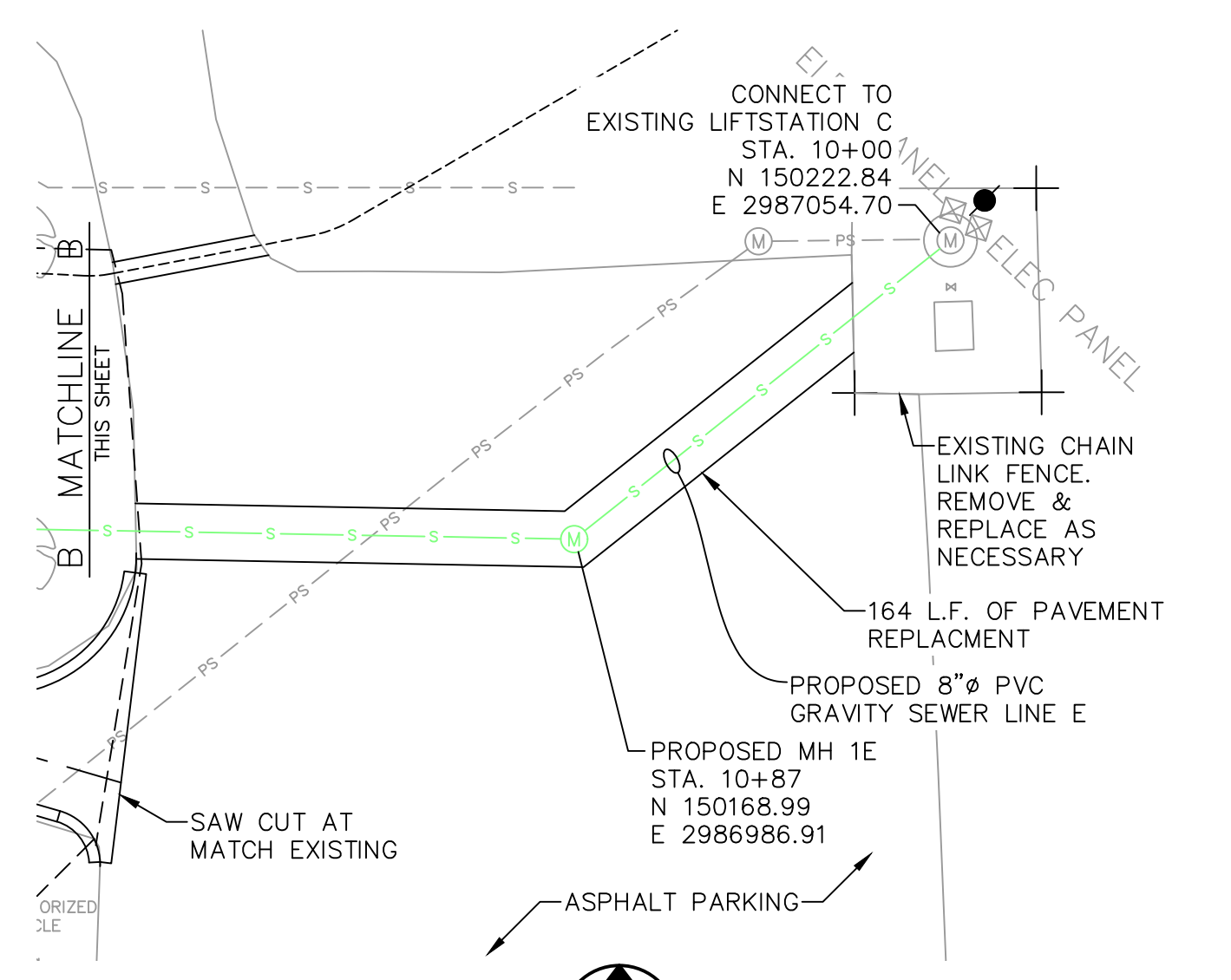
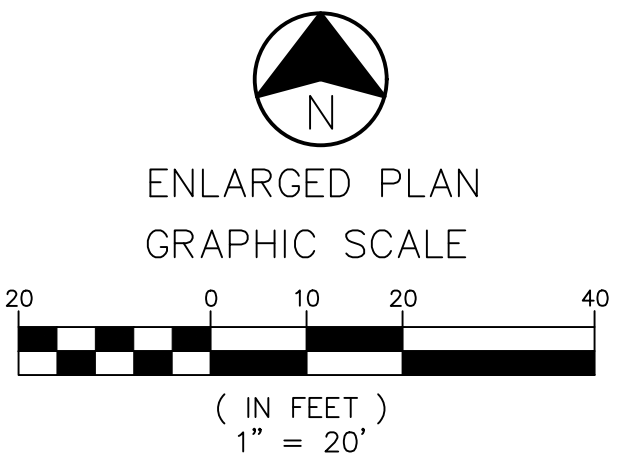
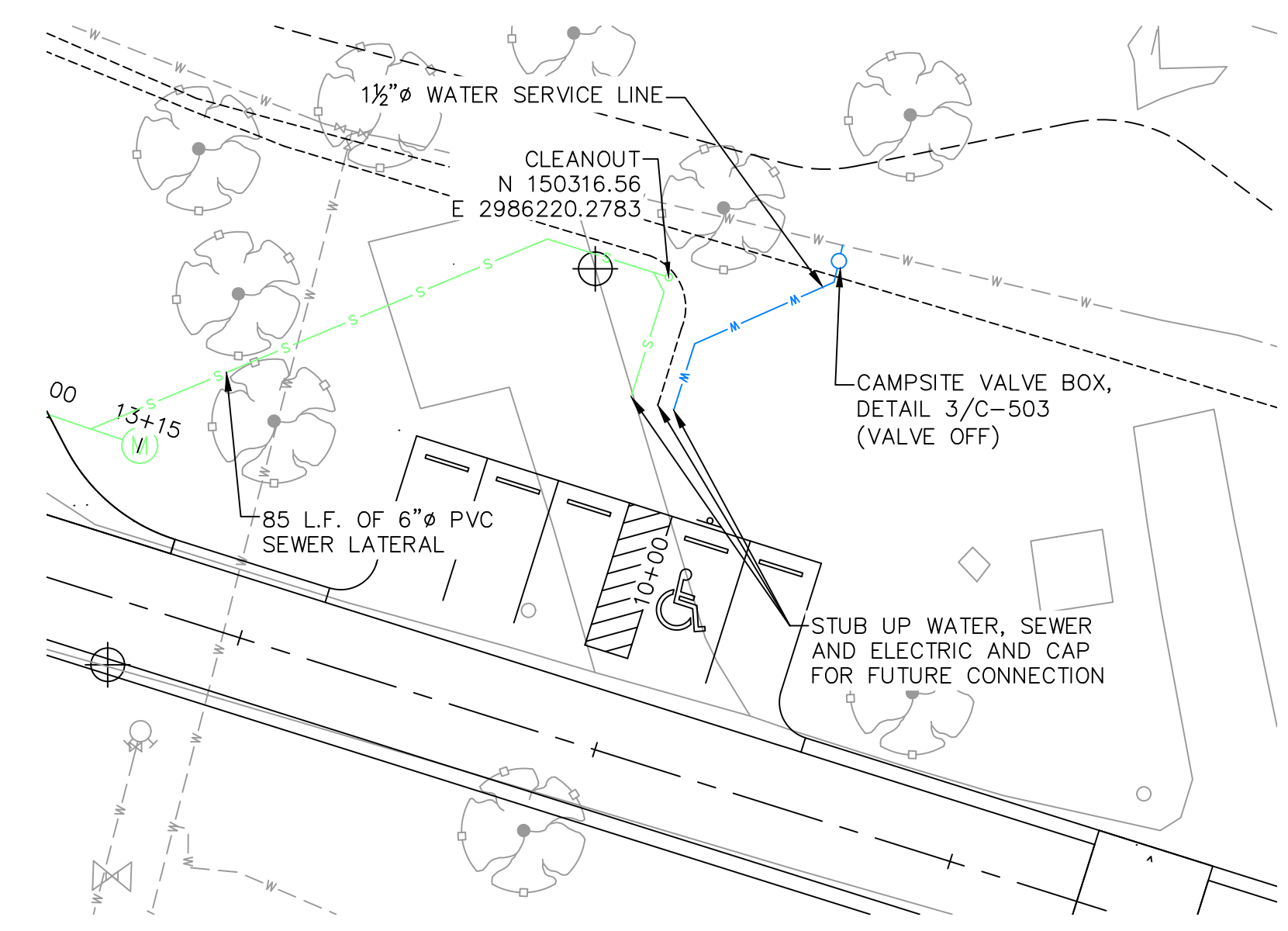
SHEET NUMBER:

**C-107**

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SEPTEMBER 22, 2023



- NOTES:**
- ALTERNATE #1 INCLUDES ALL WATER & SEWER SERVICE LINES & APPURTENANCES TO CAMPSITE 13 & 14. MH 3E & SEWER LINE E FROM STA. 14+98 TO STA. 16+26 IS ALSO INCLUDED IN ADD ALTERNATE #1.
  - IF ALTERNATE #1 IS NOT ACCEPTED, THE GRAVITY SEWER SHALL BE CONSTRUCTED TO STATION 15+15 & CAPPED FOR FUTURE CONNECTION.





CIVIL ENGINEER: MICHAEL KEATON  
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MISSOURI STATE PARKS

RENOVATE CAMPGROUND  
FULL HOOK-UP SITES

ROARING RIVER  
STATE PARK  
12716 FARM ROAD 2239  
CASSVILLE, MISSOURI

PROJECT # X2205-01  
SITE # 5309  
ASSET # 7815309057

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: \_\_\_\_\_

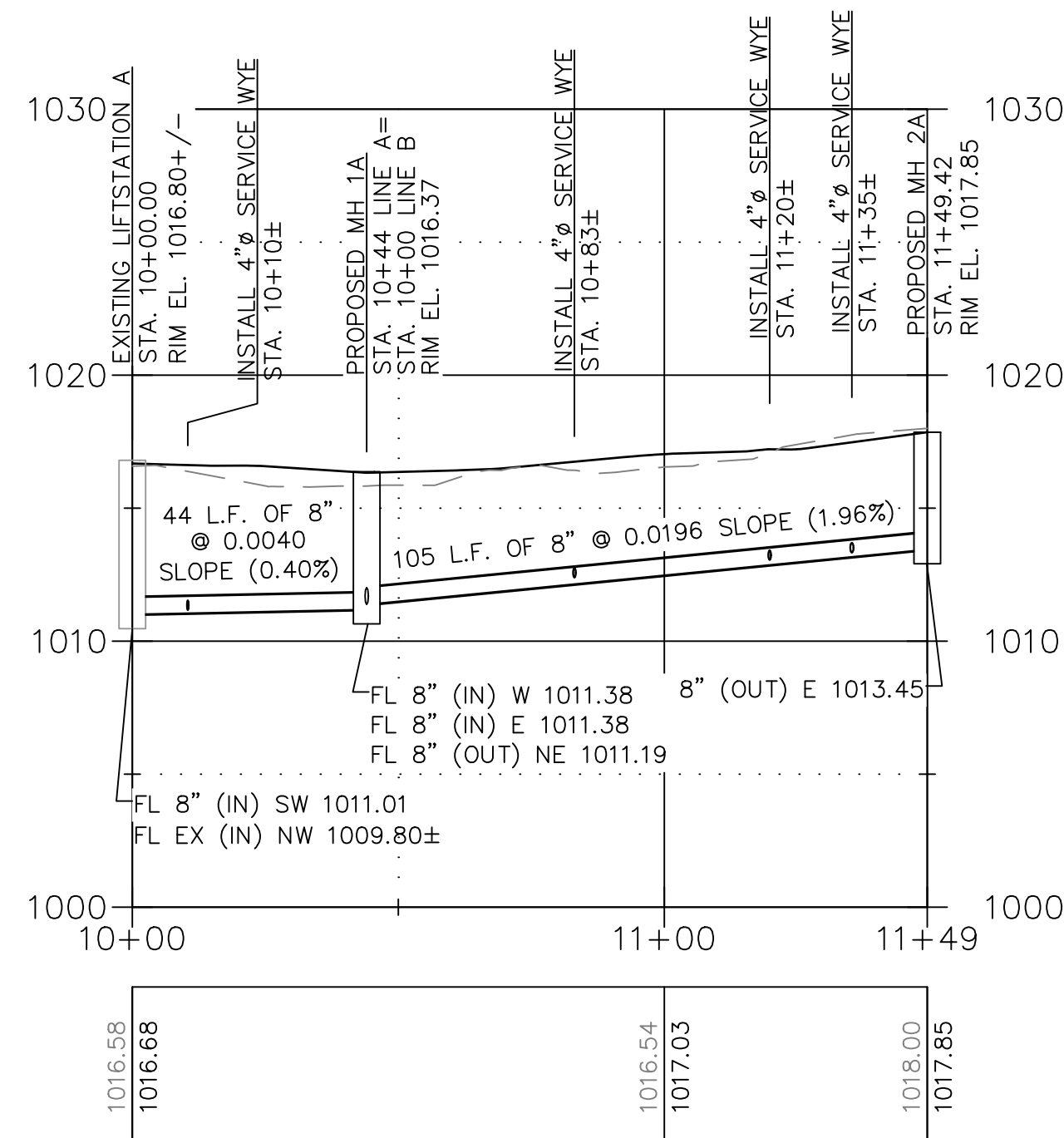
CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: AWW  
CHECKED BY: MCK  
DESIGNED BY: MCK

SHEET TITLE:  
**PROPOSED  
SEWER LINE  
PROFILES**

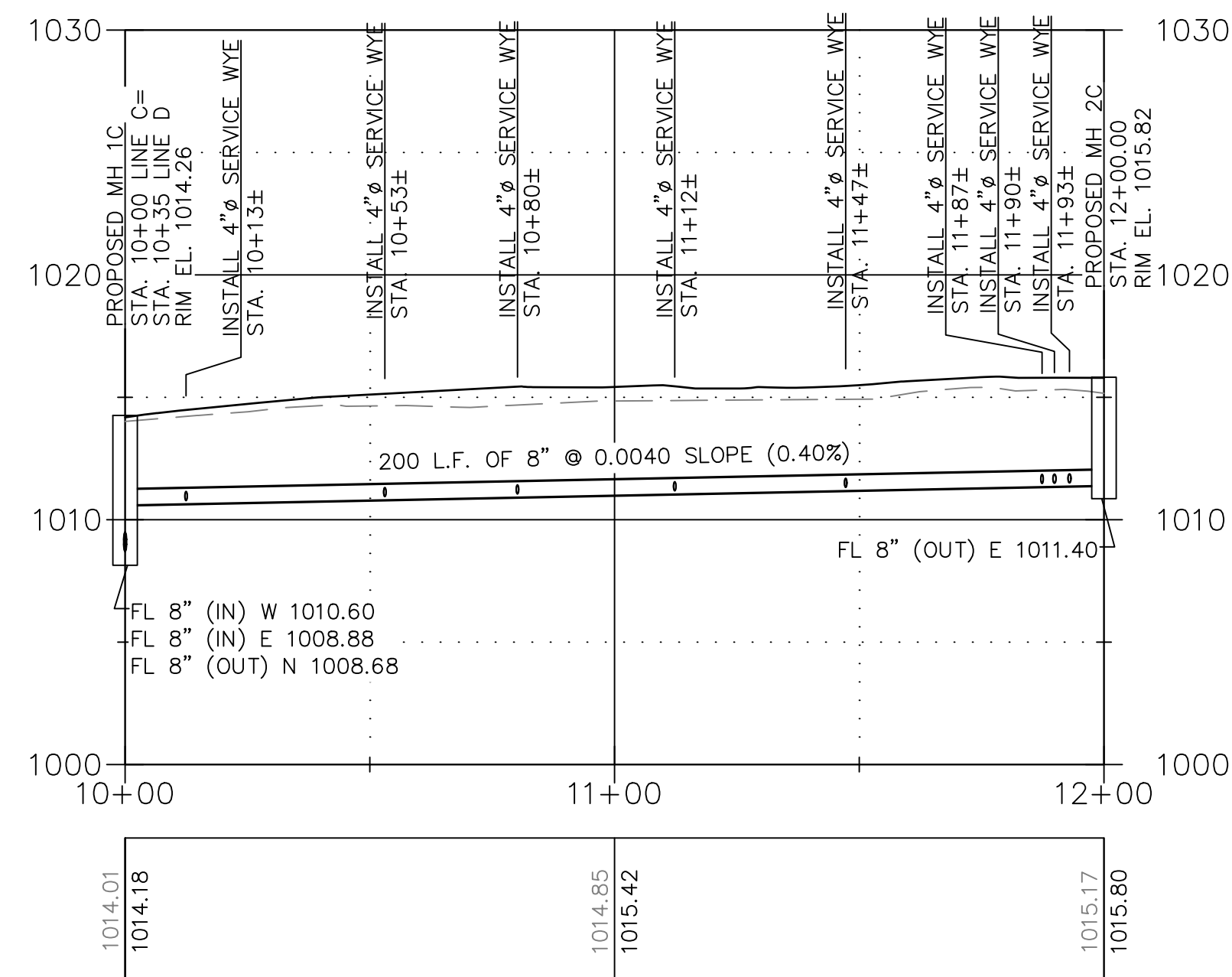
SHEET NUMBER:

**C-108**

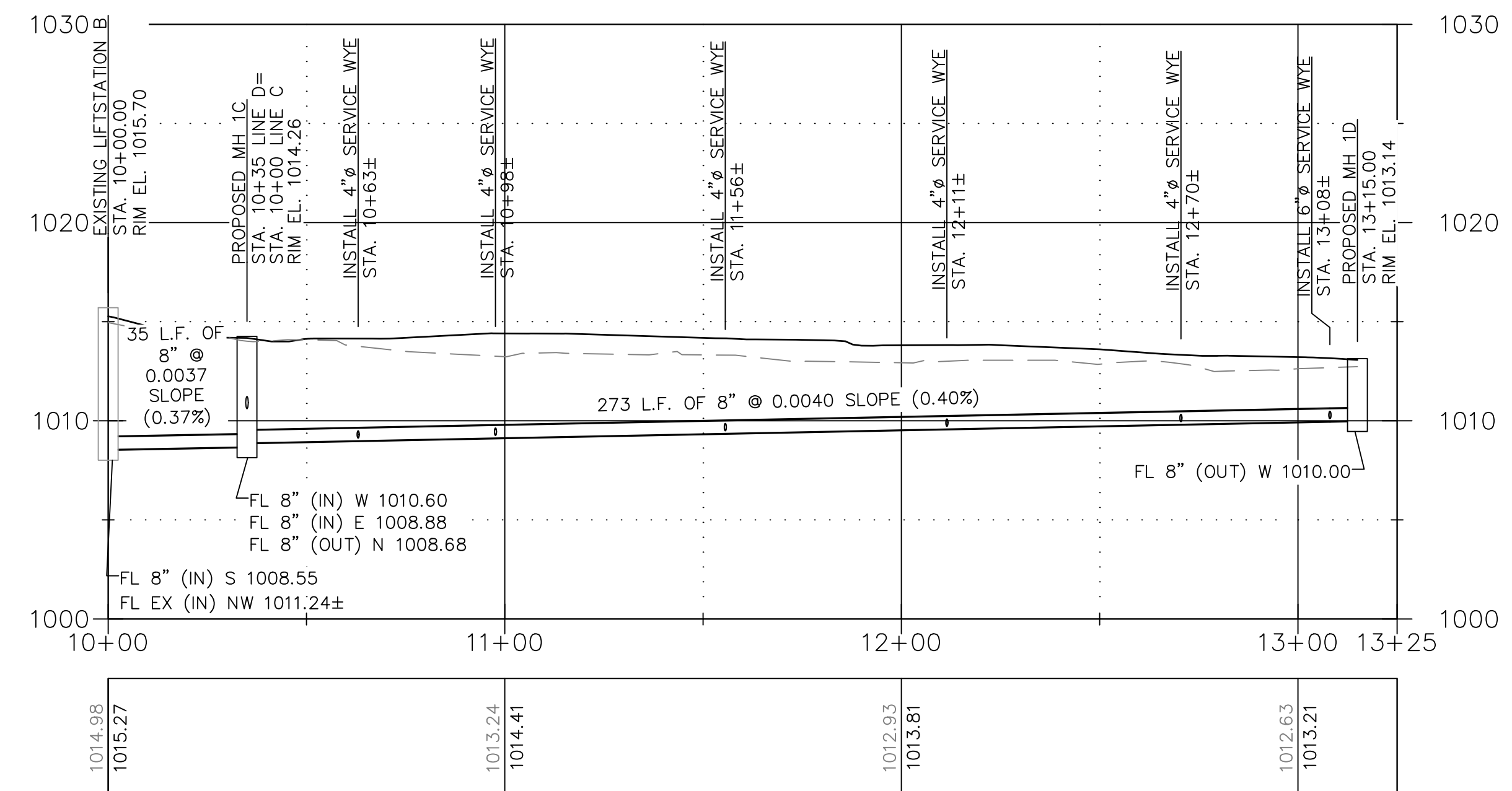
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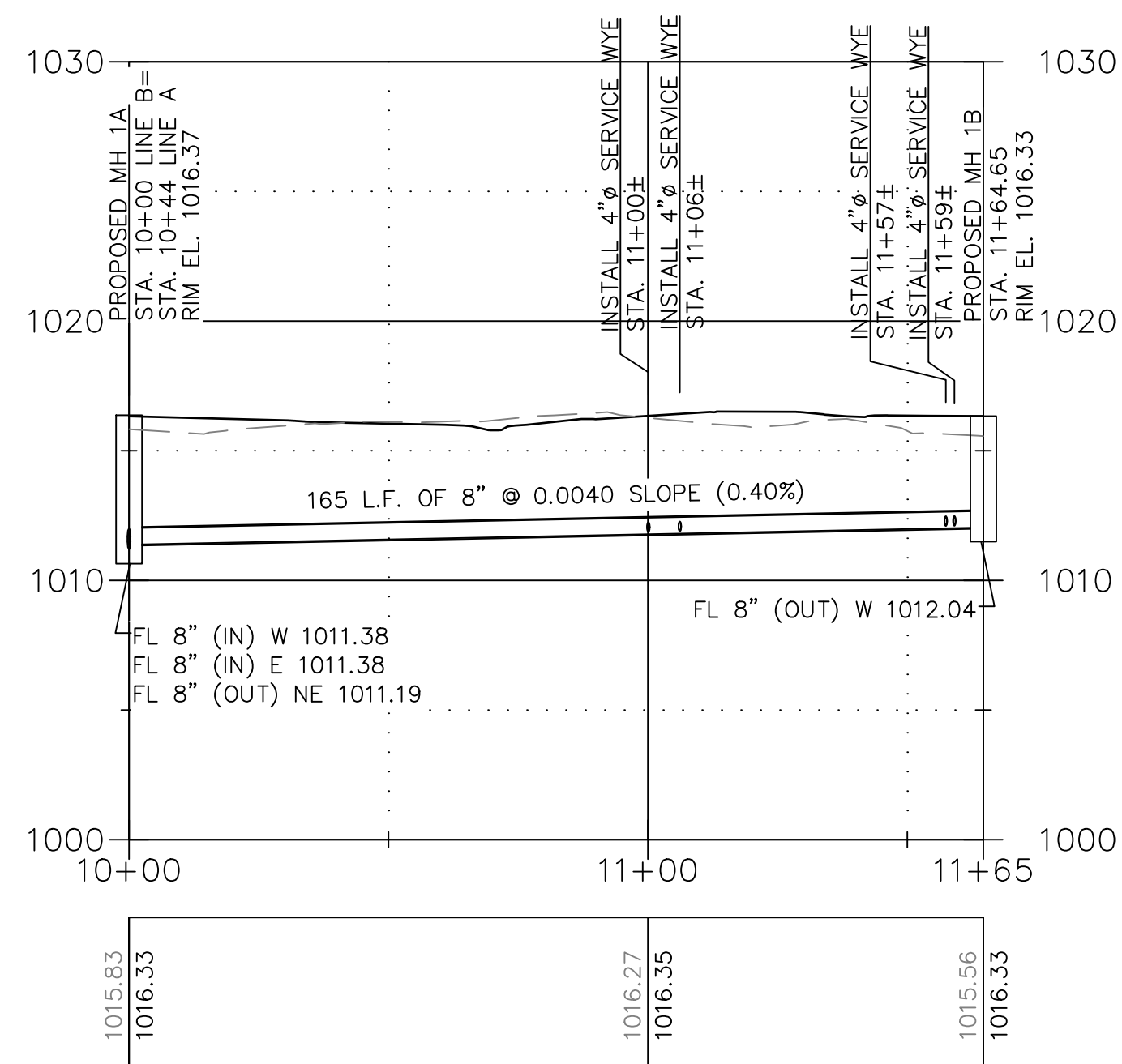
LINE A  
1:30



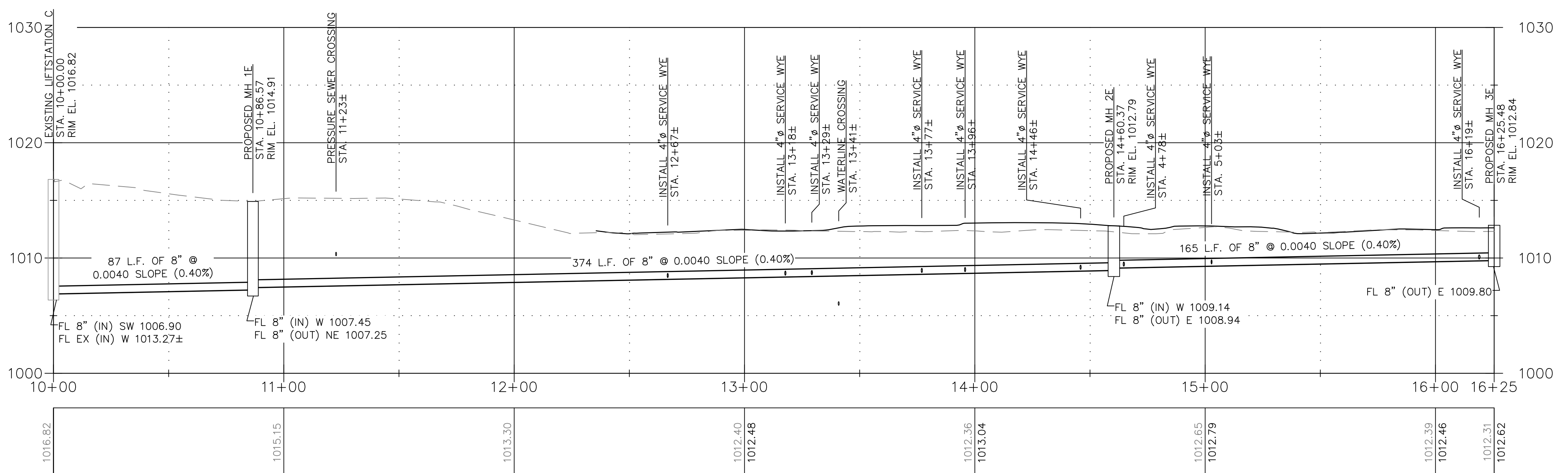
LINE C  
1:30



LINE D  
1:30



LINE B  
1:30



LINE E  
1:30



CIVIL ENGINEER: MICHAEL KEATON  
LICENSE NO. PE-2013019060



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SITE # 5309  
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REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: \_\_\_\_\_

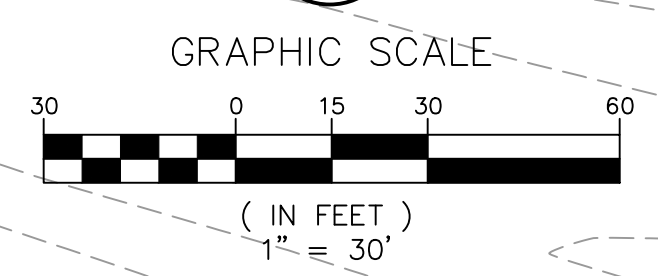
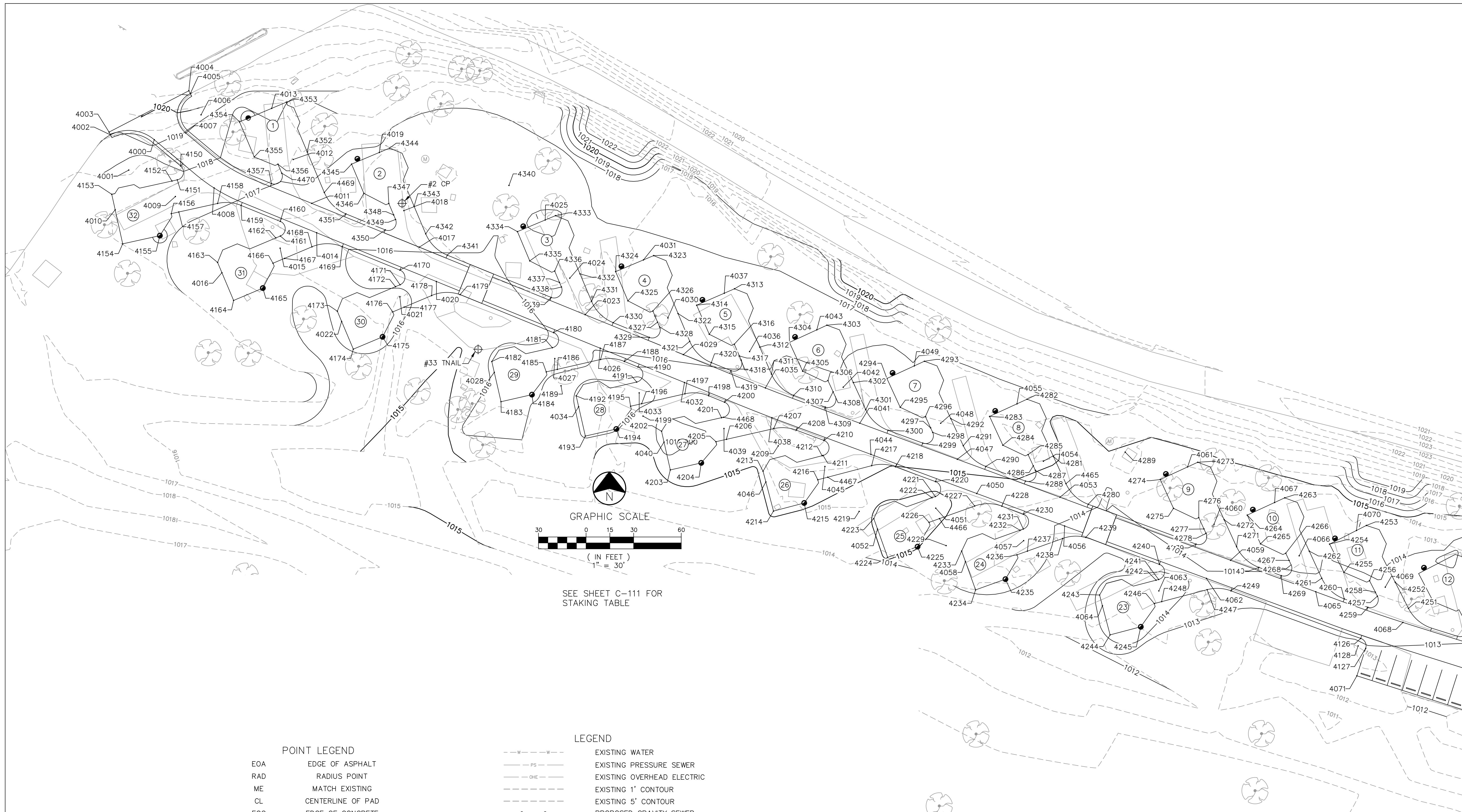
CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: AWW  
CHECKED BY: MCK  
DESIGNED BY: MCK

SHEET TITLE:  
**PROPOSED  
STAKING PLAN**

SHEET NUMBER:

**C-109**

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SEPTEMBER 22, 2023



SEE SHEET C-111 FOR  
STAKING TABLE

**POINT LEGEND**

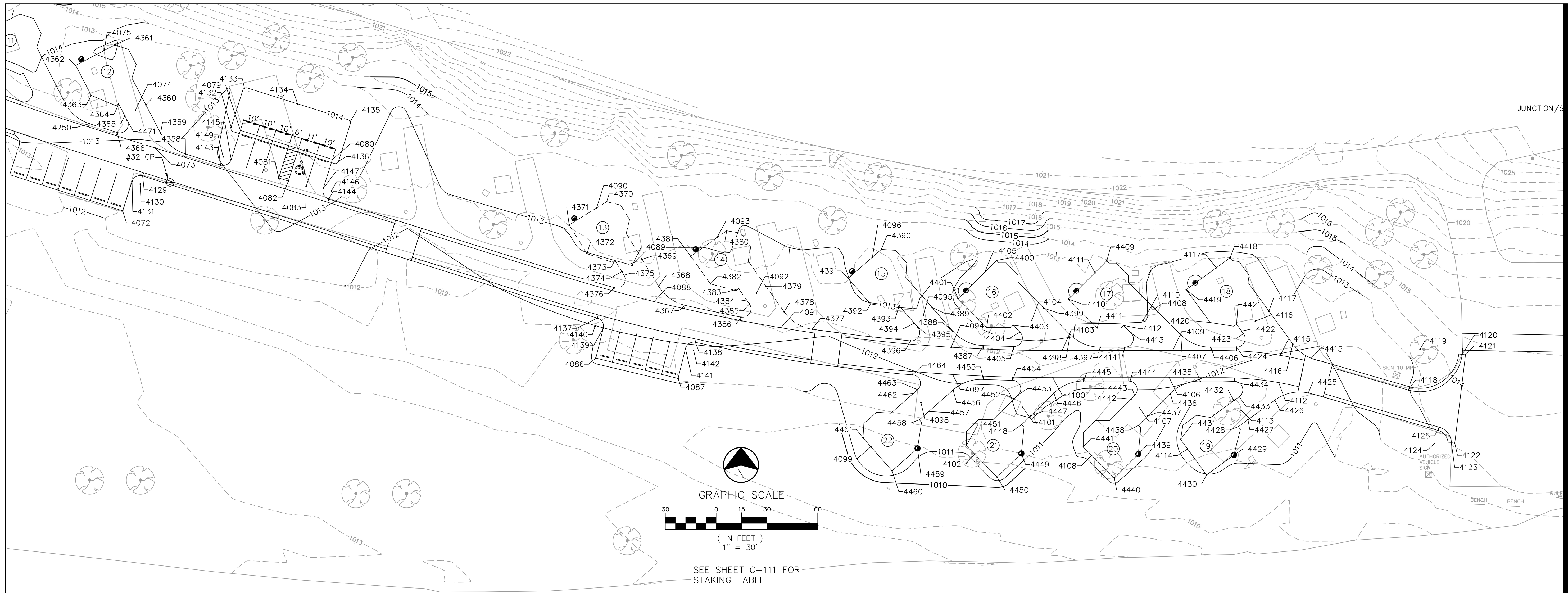
EOA	EDGE OF ASPHALT
RAD	RADIUS POINT
ME	MATCH EXISTING
CL	CENTERLINE OF PAD
EOC	EDGE OF CONCRETE
ASP	ASPHALT
FG	GROUND

CONTROL TABLE				
CONTROL	DESCRIPTION	ELEVATION	NORTHING	EASTING
# 1	CP	1013.15	150317.68	2986210.41
# 32	CP	1012.27	150264.50	2986144.92
# 33	TNAIL	1015.43	150475.02	2985496.19

**LEGEND**

---	EXISTING WATER
PS	EXISTING PRESSURE SEWER
OHE	EXISTING OVERHEAD ELECTRIC
---	EXISTING 1' CONTOUR
---	EXISTING 5' CONTOUR
S-S	PROPOSED GRAVITY SEWER
W-W	PROPOSED WATER
---	PROPOSED 1' CONTOUR
---	PROPOSED 5' CONTOUR
⊙	EXISTING CLEANOUT
⊙	EXISTING FIRE HYDRANT
⊙	EXISTING LIGHT POLE
⊙	EXISTING MANHOLE
⊙	EXISTING TREE



**POINT LEGEND**

EOA	EDGE OF ASPHALT
RAD	RADIUS POINT
ME	MATCH EXISTING
CL	CENTERLINE OF PAD
EOC	EDGE OF CONCRETE
ASP	ASPHALT
FG	GROUND

**CONTROL TABLE**

CONTROL	DESCRIPTION	ELEVATION	NORTHING	EASTING
# 1	CP	1013.15	150317.68	2986210.41
# 32	CP	1012.27	150264.50	2986144.92
# 33	TNAIL	1015.43	150475.02	2985496.19

**LEGEND**

---	EXISTING WATER
---	EXISTING PRESSURE SEWER
---	EXISTING OVERHEAD ELECTRIC
---	EXISTING 1' CONTOUR
---	EXISTING 5' CONTOUR
---	PROPOSED GRAVITY SEWER
---	PROPOSED WATER
---	PROPOSED 1' CONTOUR
---	PROPOSED 5' CONTOUR
⊙	EXISTING CLEANOUT
⊙	EXISTING FIRE HYDRANT
⊙	EXISTING LIGHT POLE
⊙	EXISTING MANHOLE
⊙	EXISTING TREE

STATE OF MISSOURI  
MICHAEL L. PARSON,  
GOVERNOR



CIVIL ENGINEER: MICHAEL KEATON  
LICENSE NO. PE-2013019060



ALLGEIER, MARTIN and ASSOCIATES, INC.  
CONSULTING ENGINEERS and ARCHITECTS  
121 EAST 5TH STREET, JOPLIN, MISSOURI 64801-1000

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ROARING RIVER  
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12716 FARM ROAD 2239  
CASSVILLE, MISSOURI

PROJECT # X2205-01  
SITE # 5309  
ASSET # 7815309057

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
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REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: \_\_\_\_\_

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: AWW  
CHECKED BY: MCK  
DESIGNED BY: MCK

SHEET TITLE:  
**PROPOSED  
STAKING PLAN**

SHEET NUMBER:  
**C-110**  
PAGE 12 OF 21  
SEPTEMBER 22, 2023



CIVIL ENGINEER: MICHAEL KEATON  
LICENSE NO. PE-2013019060



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REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_

ISSUE DATE: \_\_\_\_\_

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: AWW  
CHECKED BY: MCK  
DESIGNED BY: MCK

SHEET TITLE:  
PROPOSED  
STAKING  
TABLE

SHEET NUMBER:

C-111

STAKING TABLE				
POINT NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
# 4406	150167.24	2986759.43	1012.34	EOC
# 4407	150174.56	2986741.76	1012.61	EOC
# 4408	150189.91	2986726.40	1012.94	EOC
# 4409	150218.27	2986698.05	1013.33	EOC
# 4410	150195.64	2986675.42	1013.21	EOC
# 4411	150178.67	2986692.39	1012.97	EOC
# 4412	150180.29	2986707.94	1012.99	EOC
# 4413	150175.77	2986712.26	1012.94	EOC
# 4414	150167.24	2986708.72	1012.72	EOC
# 4415	150160.67	2986681.74	1011.85	EOC
# 4416	150169.13	2986680.91	1012.20	EOC
# 4417	150188.52	2986793.78	1012.43	EOC
# 4418	150220.04	2986770.82	1012.82	EOC
# 4419	150201.20	2986744.96	1012.70	EOC
# 4420	150181.80	2986759.09	1012.46	EOC
# 4421	150180.79	2986774.67	1012.48	EOC
# 4422	150176.74	2986777.62	1012.43	EOC
# 4423	150175.18	2986778.76	1012.41	EOC
# 4424	150167.24	2986774.72	1012.21	EOC
# 4425	150140.25	2986817.02	1011.45	EOC
# 4426	150135.98	2986797.25	1011.40	EOC
# 4427	150124.44	2986781.40	1011.32	EOC
# 4428	150120.32	2986775.74	1011.28	EOC
# 4429	150103.55	2986773.11	1011.10	EOC
# 4430	150091.78	2986756.94	1011.00	EOC
# 4431	150112.80	2986741.63	1011.12	EOC
# 4432	150135.76	2986773.16	1011.32	EOC
# 4433	150138.01	2986776.26	1011.40	EOC
# 4434	150147.05	2986773.45	1011.81	EOC
# 4435	150147.24	2986753.18	1011.98	EOC
# 4436	150139.91	2986735.50	1011.85	EOC
# 4437	150126.61	2986722.19	1011.72	EOC
# 4438	150121.07	2986716.66	1011.66	EOC
# 4439	150104.10	2986716.66	1011.45	EOC
# 4440	150098.96	2986702.52	1011.30	EOC
# 4441	150108.35	2986684.13	1011.42	EOC
# 4442	150136.51	2986712.29	1011.72	EOC
# 4443	150138.70	2986714.49	1011.80	EOC
# 4444	150147.24	2986711.76	1012.29	EOC
# 4445	150147.24	2986684.29	1012.51	EOC
# 4446	150140.10	2986666.80	1012.29	EOC
# 4447	150126.75	2986653.16	1012.02	EOC
# 4448	150121.47	2986647.76	1011.96	EOC
# 4449	150104.50	2986647.58	1011.75	EOC
# 4450	150090.51	2986633.28	1011.60	EOC
# 4451	150109.09	2986615.10	1011.72	EOC
# 4452	150136.76	2986643.37	1012.02	EOC
# 4453	150139.08	2986645.74	1012.10	EOC
# 4454	150147.65	2986642.39	1012.29	EOC
# 4455	150148.19	2986625.15	1012.19	EOC
# 4456	150141.97	2986607.25	1011.95	EOC
# 4457	150129.33	2986592.92	1011.68	EOC
# 4458	150124.40	2986587.33	1011.62	EOC
# 4459	150107.46	2986586.27	1011.41	EOC
# 4460	150094.23	2986571.27	1011.26	EOC
# 4461	150131.72	2986554.07	1011.38	EOC
# 4462	150139.83	2986583.66	1011.68	EOC
# 4463	150142.17	2986586.31	1011.74	EOC
# 4464	150150.90	2986583.40	1011.95	EOC
# 4465	150390.29	2985866.80	1014.64	EOC
# 4466	150368.25	2985787.09	1015.16	EOC
# 4467	150394.38	2985716.63	1015.53	EOC
# 4468	150432.15	2985650.77	1015.81	EOC
# 4469	150573.93	2985399.25	1016.96	EOC
# 4470	150586.17	2985372.40	1017.45	EOC
# 4471	150301.10	2986119.62	1013.58	EOC

STAKING TABLE				
POINT NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
# 4326	150499.21	2985606.39	1016.53	EOC
# 4327	150492.16	2985609.36	1016.46	EOC
# 4328	150489.14	2985610.63	1016.43	EOC
# 4329	150482.57	2985604.14	1016.26	EOC
# 4330	150491.85	2985581.35	1016.38	EOC
# 4331	150505.30	2985567.74	1016.53	EOC
# 4332	150522.64	2985560.44	1016.67	EOC
# 4333	150559.35	2985544.98	1017.06	EOC
# 4334	150549.25	2985521.02	1016.94	EOC
# 4335	150530.82	2985528.78	1016.74	EOC
# 4336	150524.42	2985544.50	1016.74	EOC
# 4337	150517.21	2985547.54	1016.67	EOC
# 4338	150514.35	2985548.74	1016.64	EOC
# 4339	150501.78	2985542.24	1016.34	EOC
# 4340	150578.40	2985515.68	1016.50	GS
# 4341	150534.44	2985476.78	1015.97	EOC
# 4342	150547.89	2985463.17	1016.15	EOC
# 4343	150565.23	2985455.87	1016.53	EOC
# 4344	150601.93	2985440.41	1016.92	EOC
# 4345	150591.84	2985416.45	1016.78	EOC
# 4346	150573.41	2985424.21	1016.58	EOC
# 4347	150567.01	2985439.93	1016.60	EOC
# 4348	150559.79	2985442.97	1016.53	EOC
# 4349	150556.94	2985444.17	1016.45	EOC
# 4350	150550.37	2985437.68	1016.28	EOC
# 4351	150560.47	2985412.86	1016.47	EOC
# 4352	150599.55	2985388.47	1017.67	EOC
# 4353	150630.89	2985375.29	1018.01	EOC
# 4354	150618.48	2985345.79	1017.89	EOC
# 4355	150596.36	2985355.10	1017.67	EOC
# 4356	150591.80	2985370.03	1017.67	EOC
# 4357	150579.60	2985365.91	1017.03	EOC
# 4358	150281.34	2986153.97	1012.79	EOC
# 4359	150293.63	2986139.30	1013.22	EOC
# 4360	150310.32	2986130.60	1013.62	EOC
# 4361	150345.64	2986112.20	1014.01	1014.01
# 4362	150333.62	2986089.14	1013.89	EOC
# 4363	150315.89	2986098.38	1013.69	EOC
# 4364	150310.79	2986114.57	1013.69	EOC
# 4365	150303.85	2986118.19	1013.62	EOC
# 4366	150294.02	2986113.69	1013.10	EOC
# 4367	150191.96	2986449.03	1012.52	EOC
# 4368	150203.21	2986433.42	1012.73	EOC
# 4369	150219.14	2986423.62	1012.93	EOC
# 4370	150253.11	2986402.72	1013.32	EOC
# 4371	150239.48	2986380.58	1013.20	EOC
# 4372	150222.45	2986391.06	1013.00	EOC
# 4373	150218.51	2986407.57	1013.00	EOC
# 4374	150211.80	2986411.70	1012.93	EOC
# 4375	150209.78	2986412.94	1012.90	EOC
# 4376	150202.35	2986407.30	1012.76	EOC
# 4377	150177.86	2986524.04	1012.10	EOC
# 4378	150188.10	2986507.50	1012.45	EOC
# 4379	150203.18	2986496.82	1012.65	EOC
# 4380	150235.98	2986473.58	1013.04	EOC
# 4381	150220.94	2986452.37	1012.92	EOC
# 4382	150204.63	2986463.93	1012.72	EOC
# 4383	150201.77	2986480.66	1012.72	EOC
# 4384	150195.08	2986485.40	1012.65	EOC
# 4385	150192.82	2986487.00	1012.62	EOC
# 4386	150185.01	2986482.03	1012.34	EOC
# 4387	150168.16	2986625.22	1012.58	EOC
# 4388	150176.69	2986602.10	1012.73	EOC
# 4389	150190.63	2986594.93	1012.86	EOC
# 4390	150224.98	2986564.87	1013.25	EOC
# 4391	150207.85	2986545.31	1013.13	EOC
# 4392	150192.80	2986558.48	1012.93	EOC
# 4393	150191.68	2986575.41	1012.93	EOC
# 4394	150181.41	2986584.40	1012.86	EOC
# 4395	150179.24	2986586.30	1012.83	EOC
# 4396	150170.97	2986582.02	1012.33	EOC
# 4397	150167.24	2986694.15	1012.83	EOC
# 4398	150174.64	2986676.39	1013.00	EOC
# 4399	150190.24	2986660.93	1013.21	EOC
# 4400	150218.44	2986632.97	1013.51	EOC
# 4401	150195.91	2986610.29	1013.39	EOC
# 4402	150178.87	2986627.14	1013.22	EOC
# 4403	150180.21	2986642.70	1013.27	EOC
# 4404	150176.16	2986646.72	1013.21	EOC
# 4405	150167.64	2986643.03	1012.69	EOC

STAKING TABLE				
POINT NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
# 4246	150314.66	2985922.53	1014.23	EOC
# 4247	150323.41	2985955.81	1013.81	EOC
# 4248	150315.88	2985927.17	1014.14	EOC
# 4249	150322.68	2985970.84	1013.74	EOC
# 4250	150299.19	2986097.27	1013.22	EOC
# 4251	150311.64	2986082.74	1013.59	EOC
# 4252	150328.19	2986074.35	1013.89	EOC
# 4253	150363.94	2986056.21	1014.28	EOC
# 4254	150352.18	2986033.03	1014.16	EOC
# 4255	150334.34	2986042.07	1013.96	EOC
# 4256	150329.07	2986058.21	1013.96	EOC
# 4257	150319.32	2986063.15	1013.82	EOC
# 4258	150321.86	2986061.86	1013.89	EOC
# 4259	150312.31	2986057.14	1013.53	EOC
# 4260	150317.62	2986042.26	1013.64	EOC
# 4261	150330.65	2986028.08	1013.96	EOC
# 4262	150347.73	2986020.21	1014.27	EOC
# 4263	150441.99	2986004.71	1014.66	EOC
# 4264	150370.46	2985981.10	1014.54	EOC
# 4265	150352.30	2985989.47	1014.34	EOC
# 4266	150346.42	2986005.40	1014.34	EOC
# 4267	150341.87	2986007.49	1014.27	EOC
# 4268	150339.08	2986008.78	1014.22	EOC
# 4269	150332.30	2986002.50	1013.95	EOC
# 4270	150337.50	2985996.43	1014.06	EOC
# 4271	150350.50	2985974.39	1014.34	EOC
# 4272	150367.60	2985966.53	1014.47	EOC
# 4273	150403.78	2985949.88	1014.86	EOC
# 4274	150392.92	2985926.26	101	



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101 EAST MAIN STREET, JOPLIN, MISSOURI 64801-1000

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MISSOURI STATE PARKS

RENOVATE CAMPGROUND  
FULL HOOK-UP SITES

ROARING RIVER  
STATE PARK  
12716 FARM ROAD 2239  
CASSVILLE, MISSOURI

PROJECT # X2205-01  
SITE # 5309  
ASSET # 7815309057

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: \_\_\_\_\_

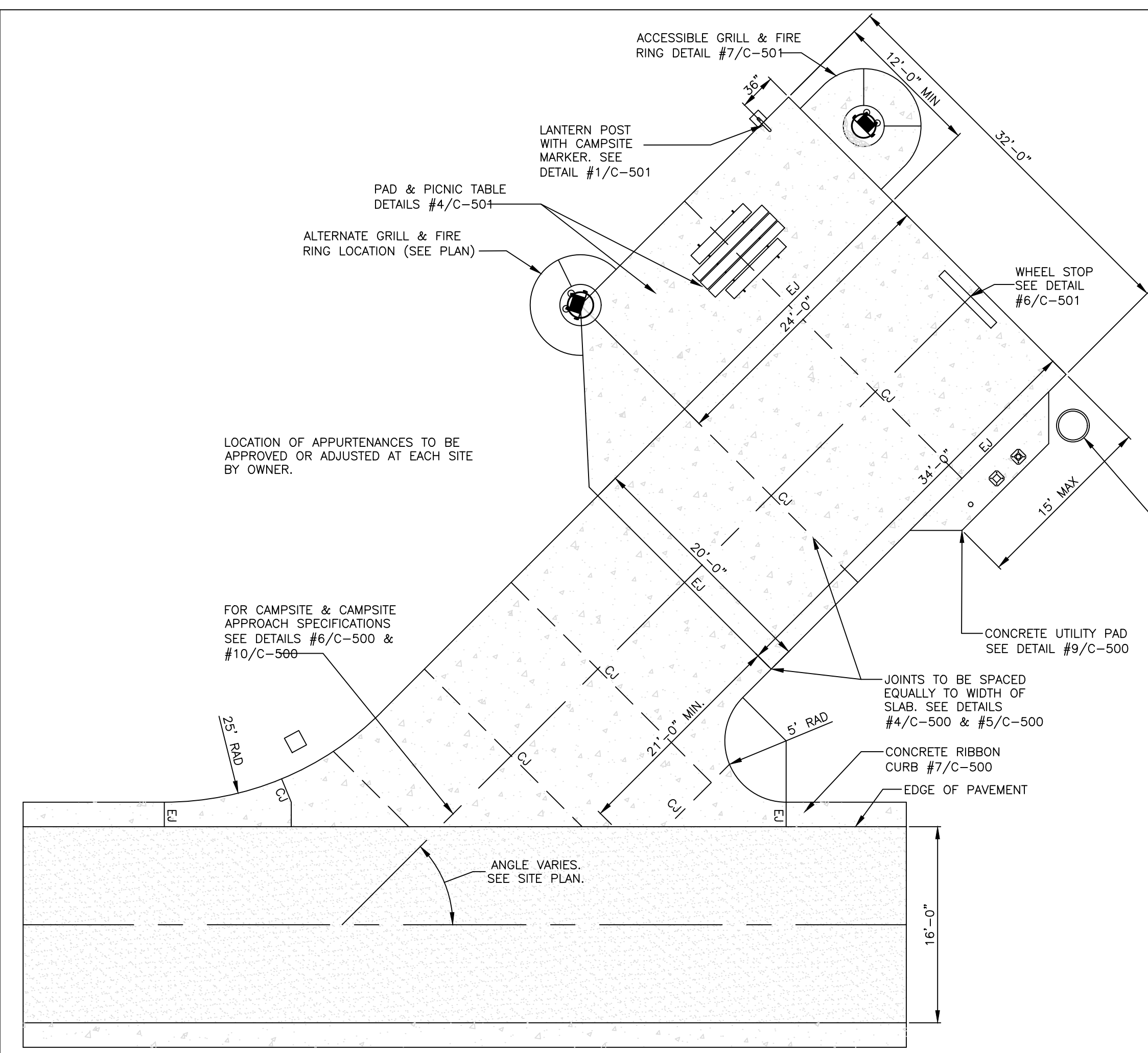
CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: AWW  
CHECKED BY: MCK  
DESIGNED BY: MCK

SHEET TITLE:  
**STANDARD  
CAMPSITE  
DETAILS**

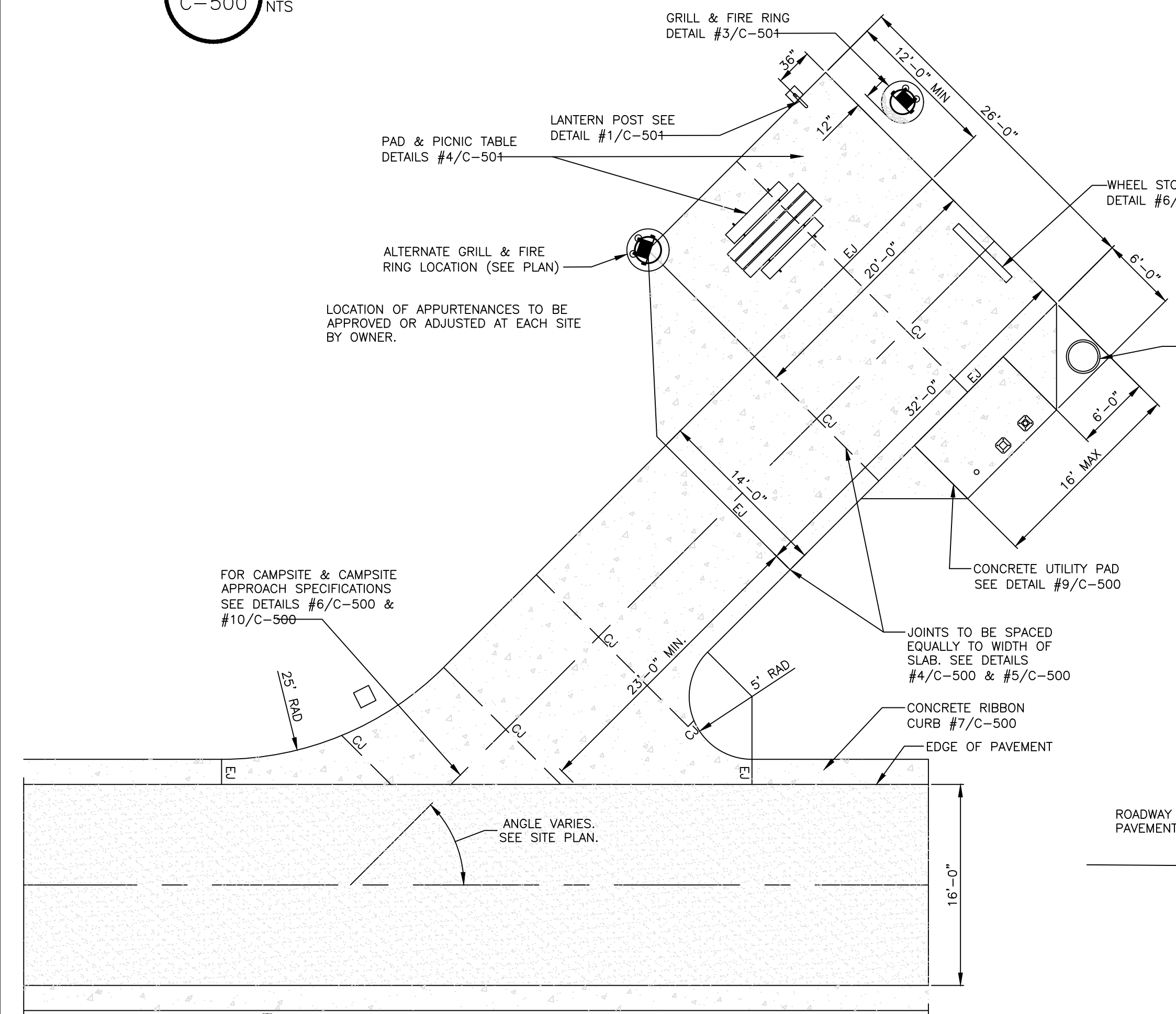
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**C-500**

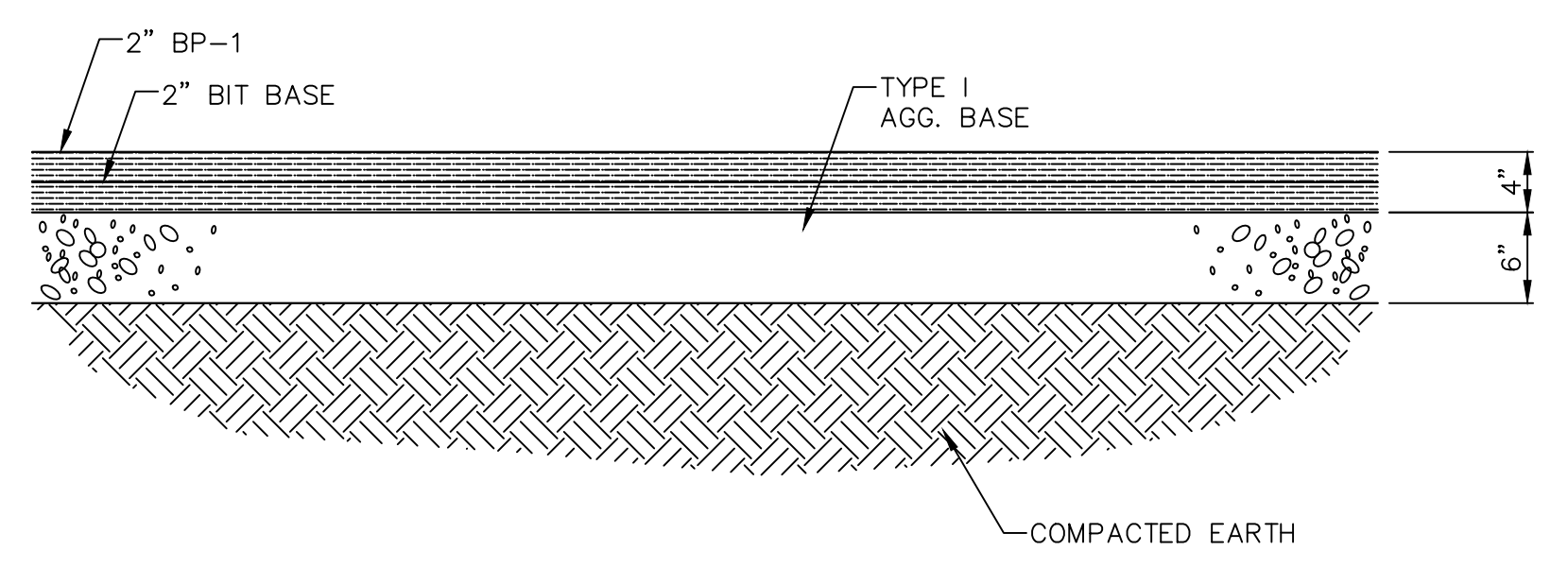
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SEPTEMBER 22, 2023



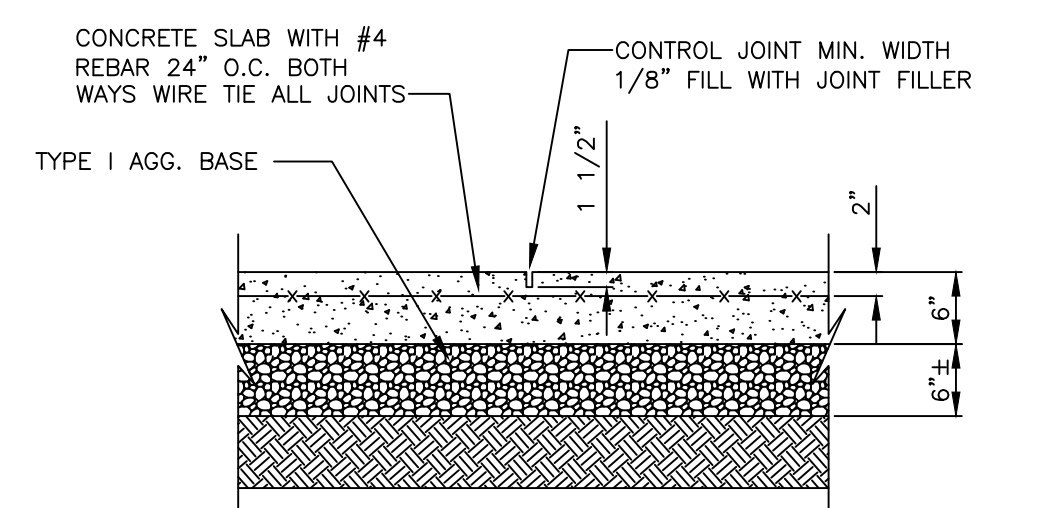
**1** HOST/ACCESSIBLE CAMPSITE LAYOUT  
C-500 NTS



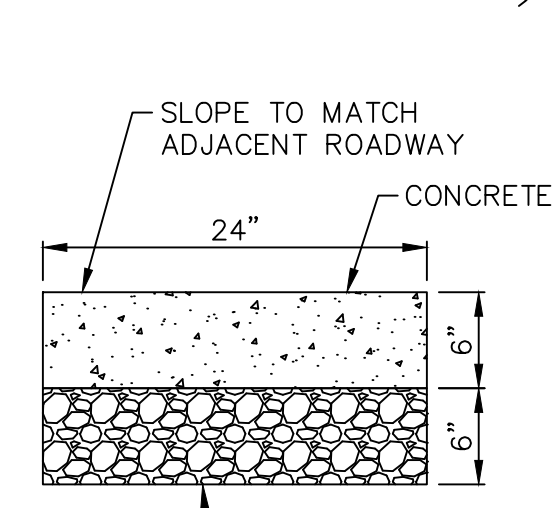
**2** TYPICAL CAMPSITE LAYOUT  
C-500 NTS



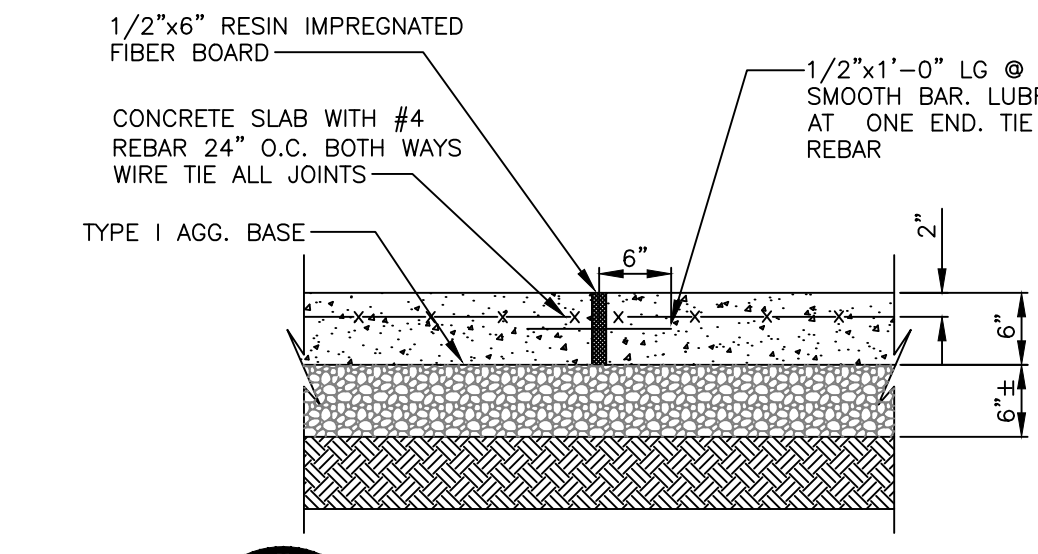
**3** ASPHALT SURFACE DETAIL (ROADWAY/PARKING)  
C-500 1" = 1'-0"



**4** CONTROL JOINT (CJ)  
C-500 NTS

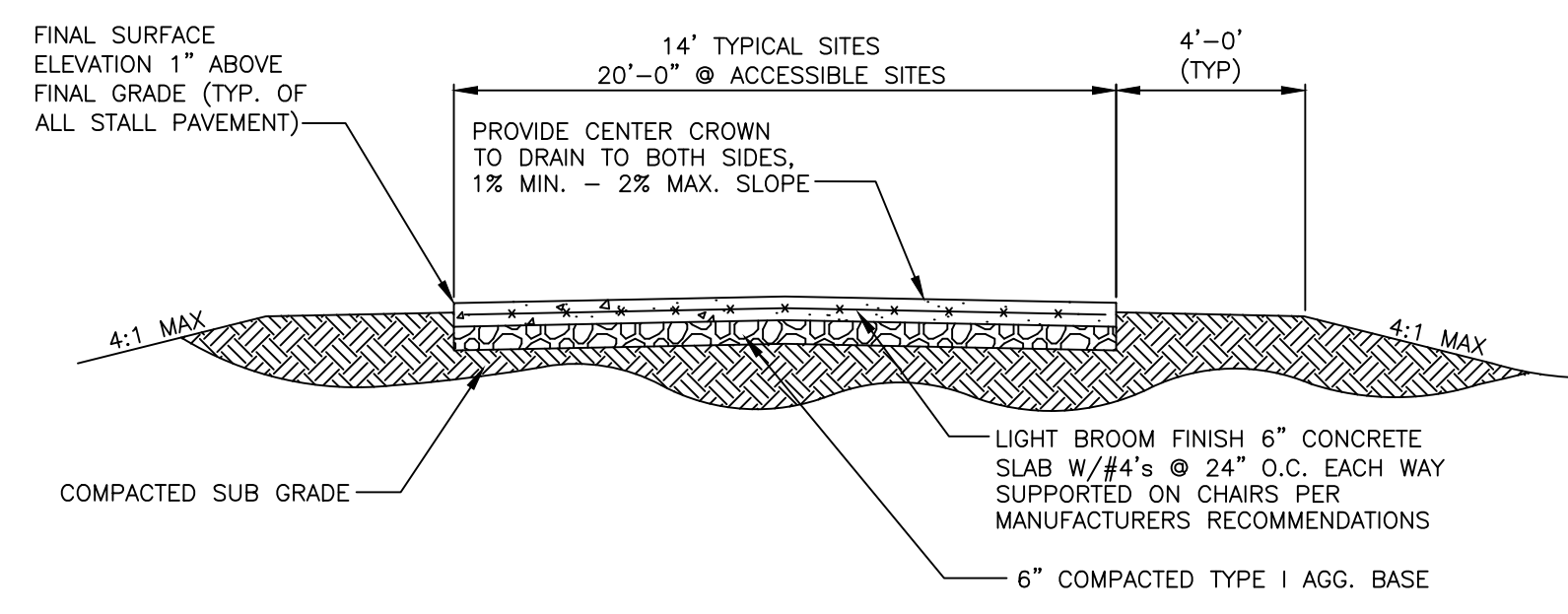


**7** RIBBON CURB DETAIL  
C-500 N.T.S. (ALTERNATE #1)

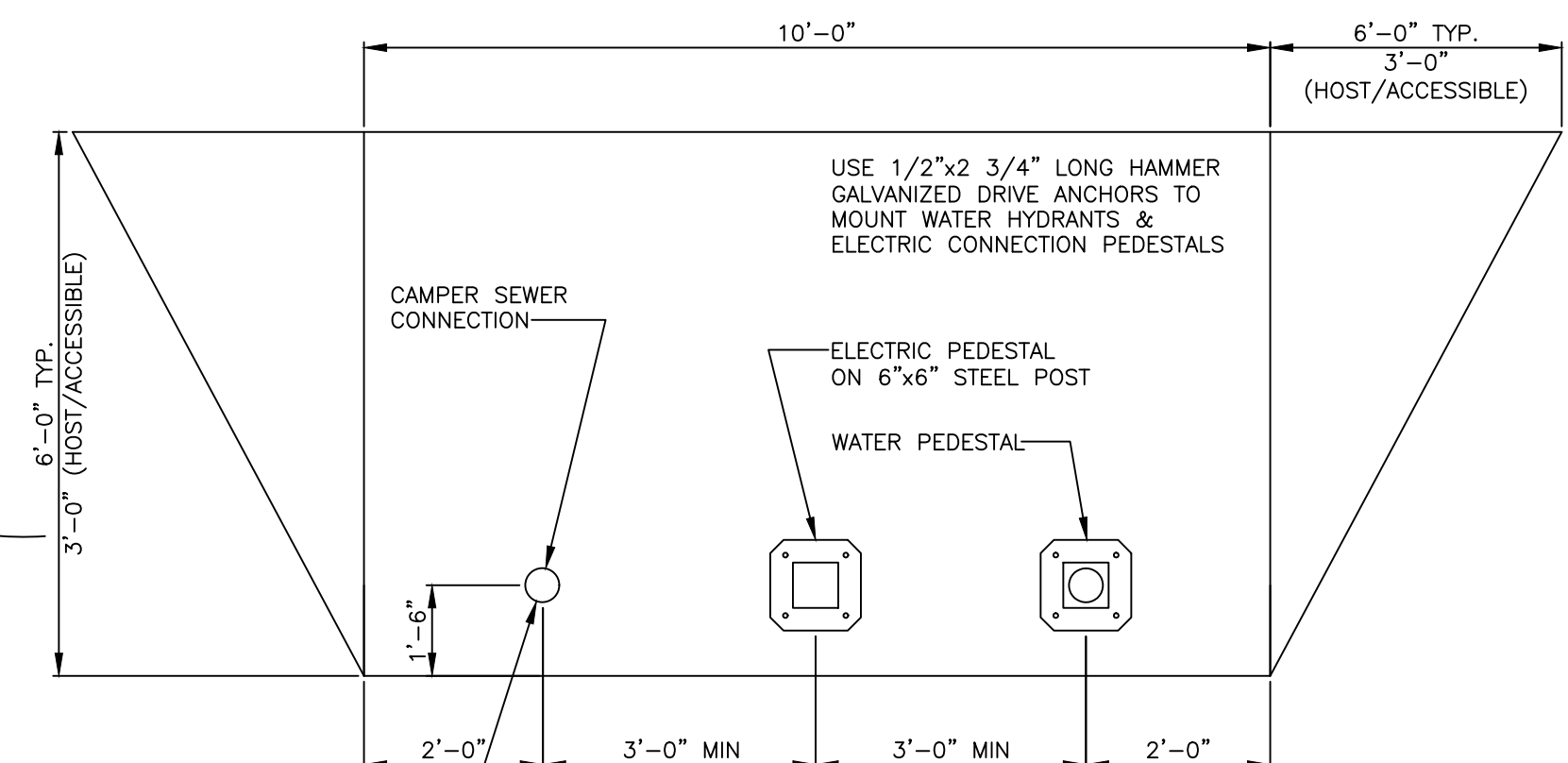


**5** EXPANSION JOINT (EJ)  
C-500 NTS

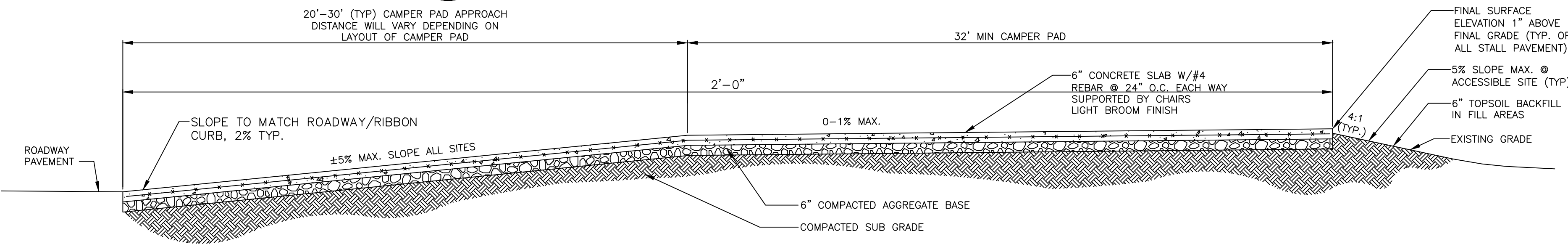
**8** CONCRETE CROSSING DETAIL  
C-500 NTS



**6** CAMPSITE CROSS SECTION  
C-500 NTS



**9** UTILITY PAD  
C-500 NTS



**10** CAMPSITE LONGITUDINAL ELEVATION  
C-500 NTS



CIVIL ENGINEER: MICHAEL KEATON  
LICENSE NO. PE-2013019060



ALLGEIER, MARTIN and ASSOCIATES, INC.  
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ROARING RIVER  
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12716 FARM ROAD 2239  
CASSVILLE, MISSOURI

PROJECT # X2205-01  
SITE # 5309  
ASSET # 7815309057

REVISION: \_\_\_\_\_  
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DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: \_\_\_\_\_

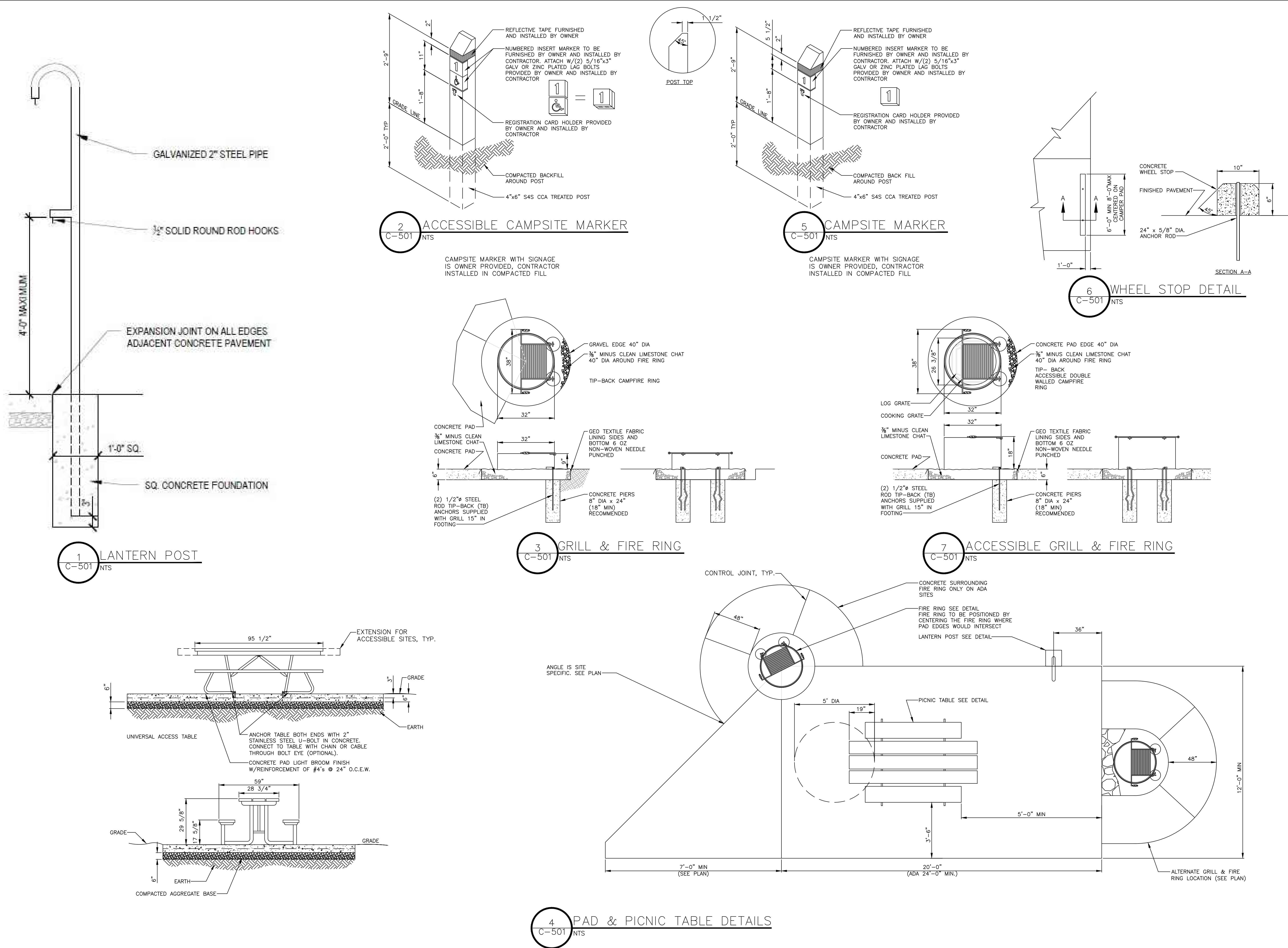
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DRAWN BY: AWW  
CHECKED BY: MCK  
DESIGNED BY: MCK

SHEET TITLE:  
**STANDARD  
CAMPSITE  
DETAILS**

SHEET NUMBER:

**C-501**

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**4** PAD & PICNIC TABLE DETAILS  
C-501 NTS



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LICENSE NO. PE-2013019060



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DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: \_\_\_\_\_

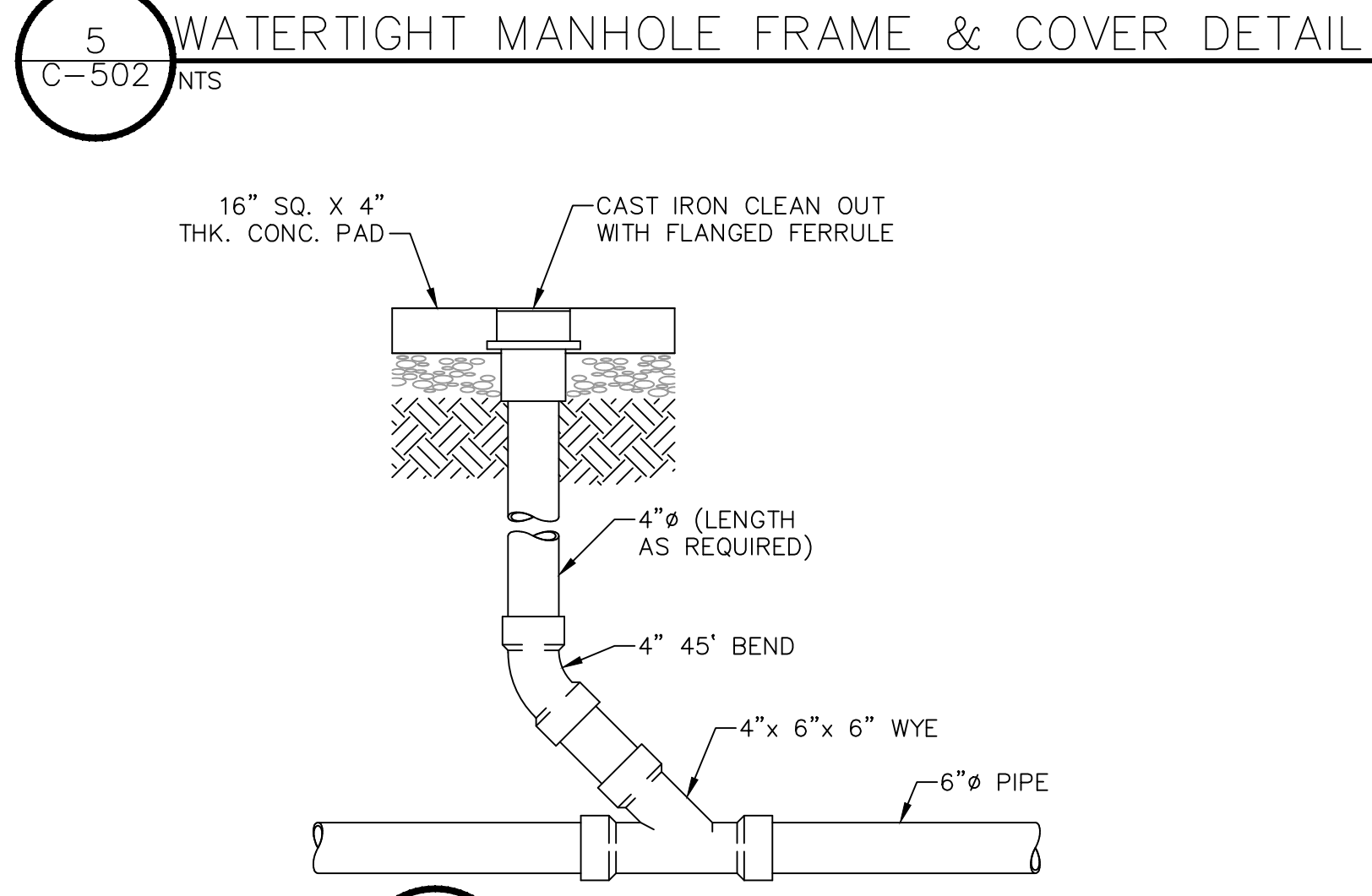
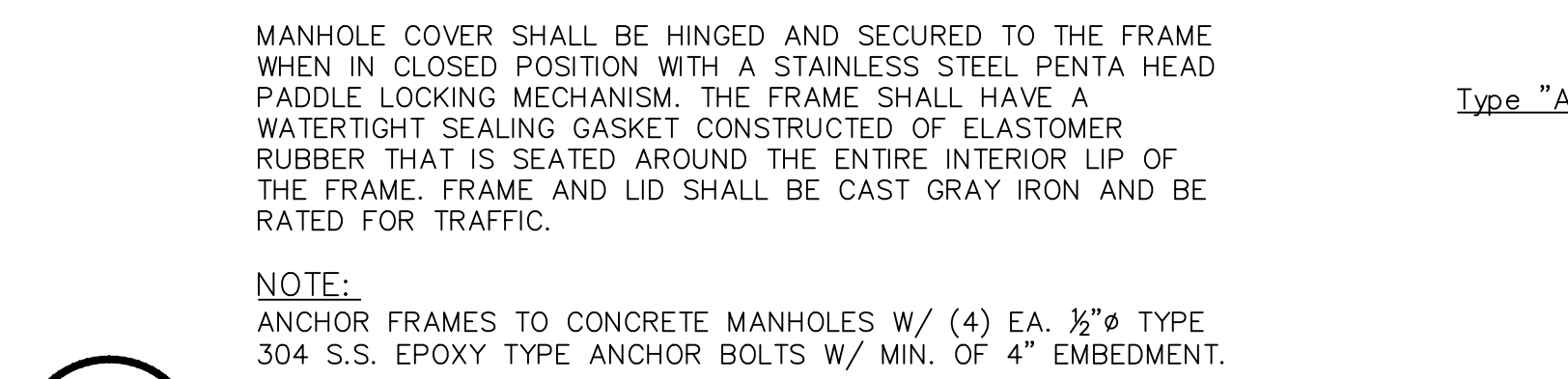
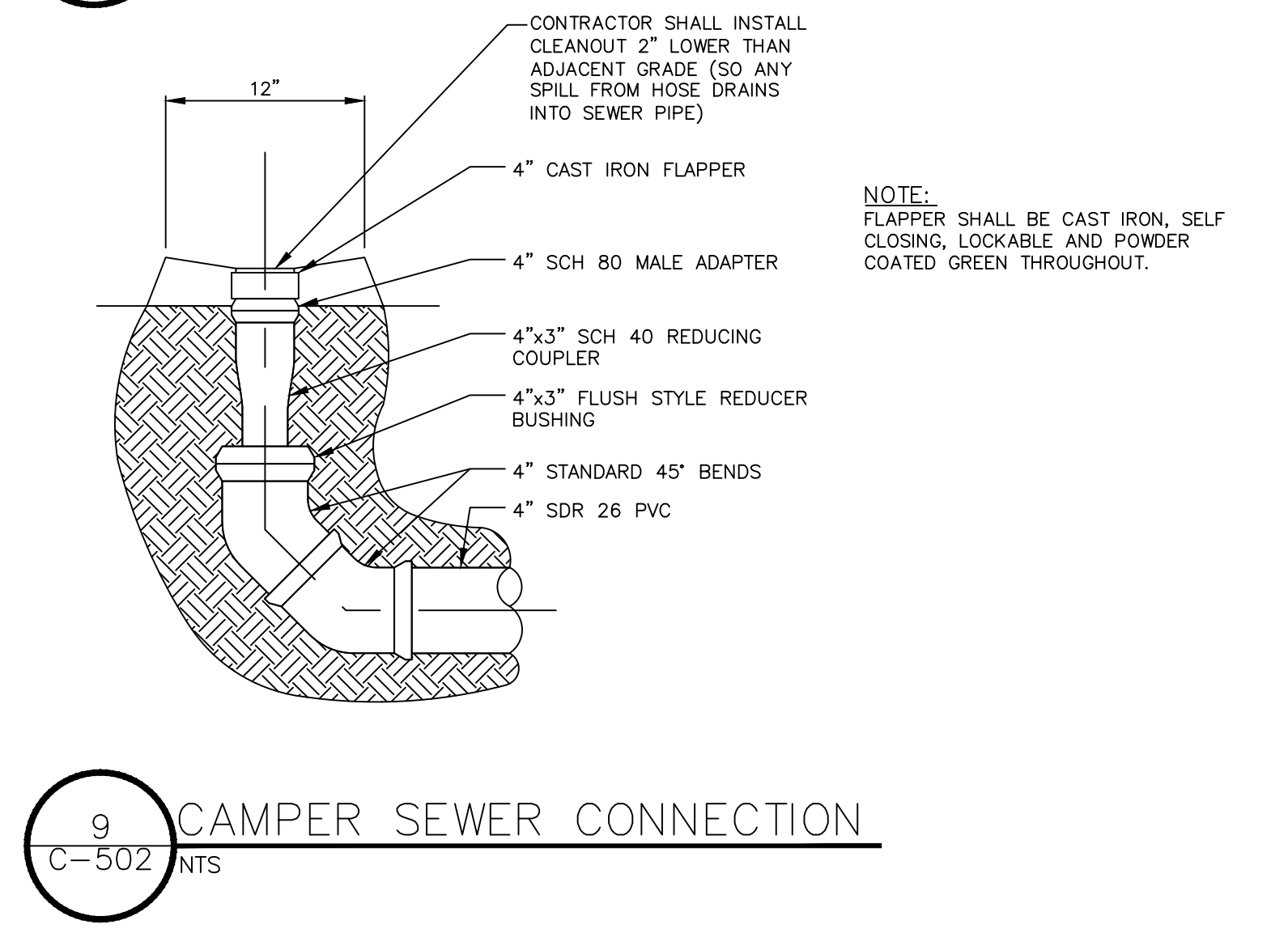
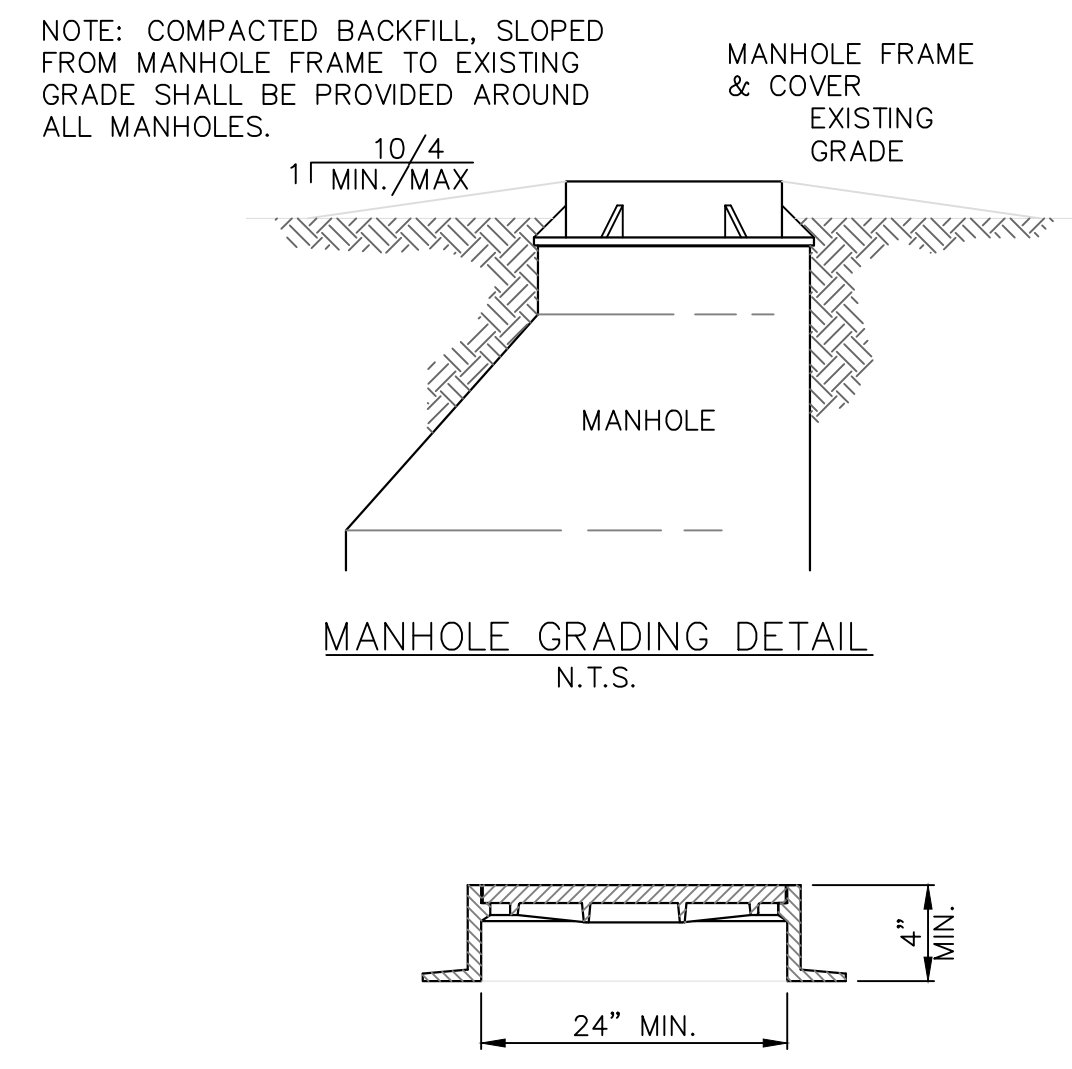
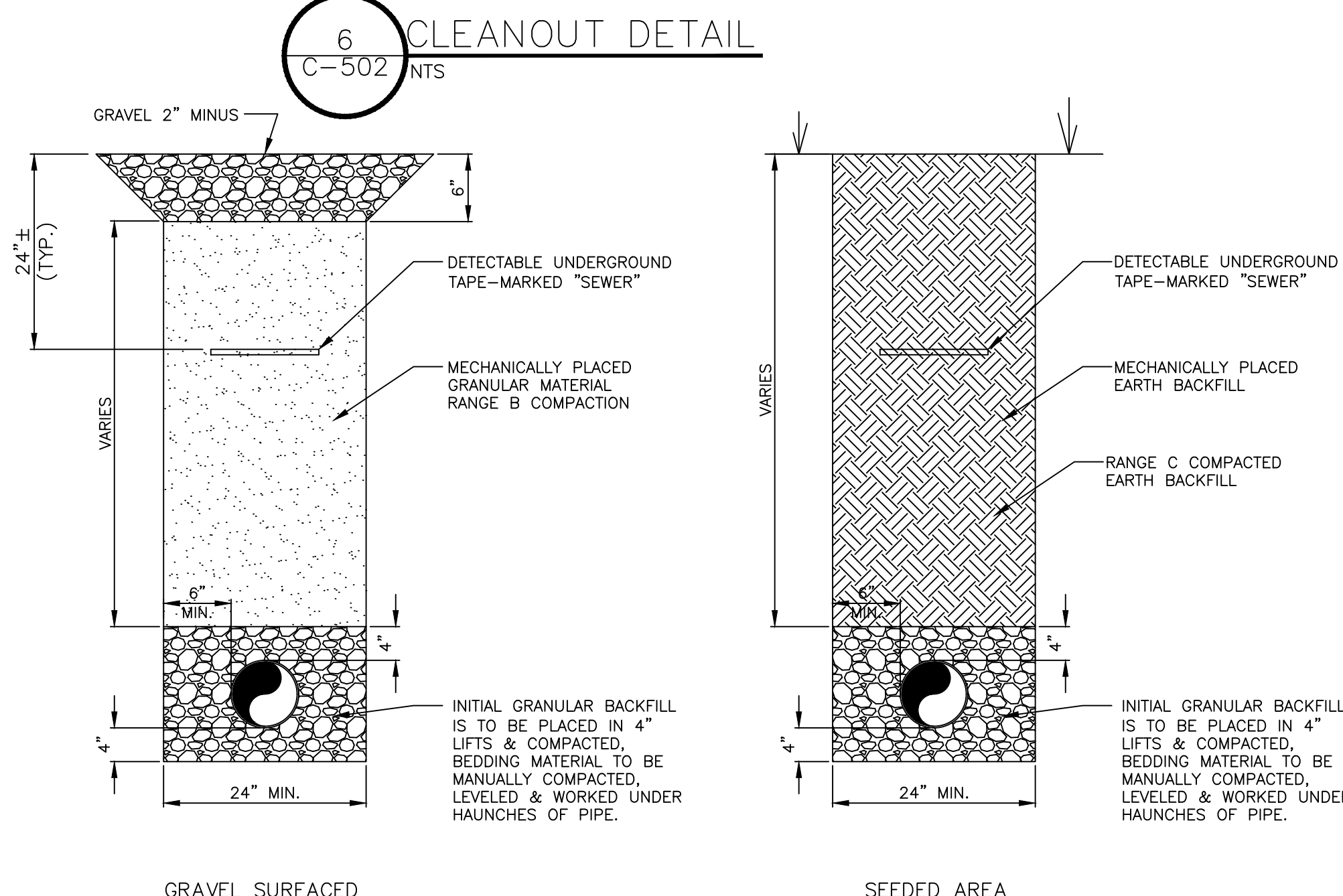
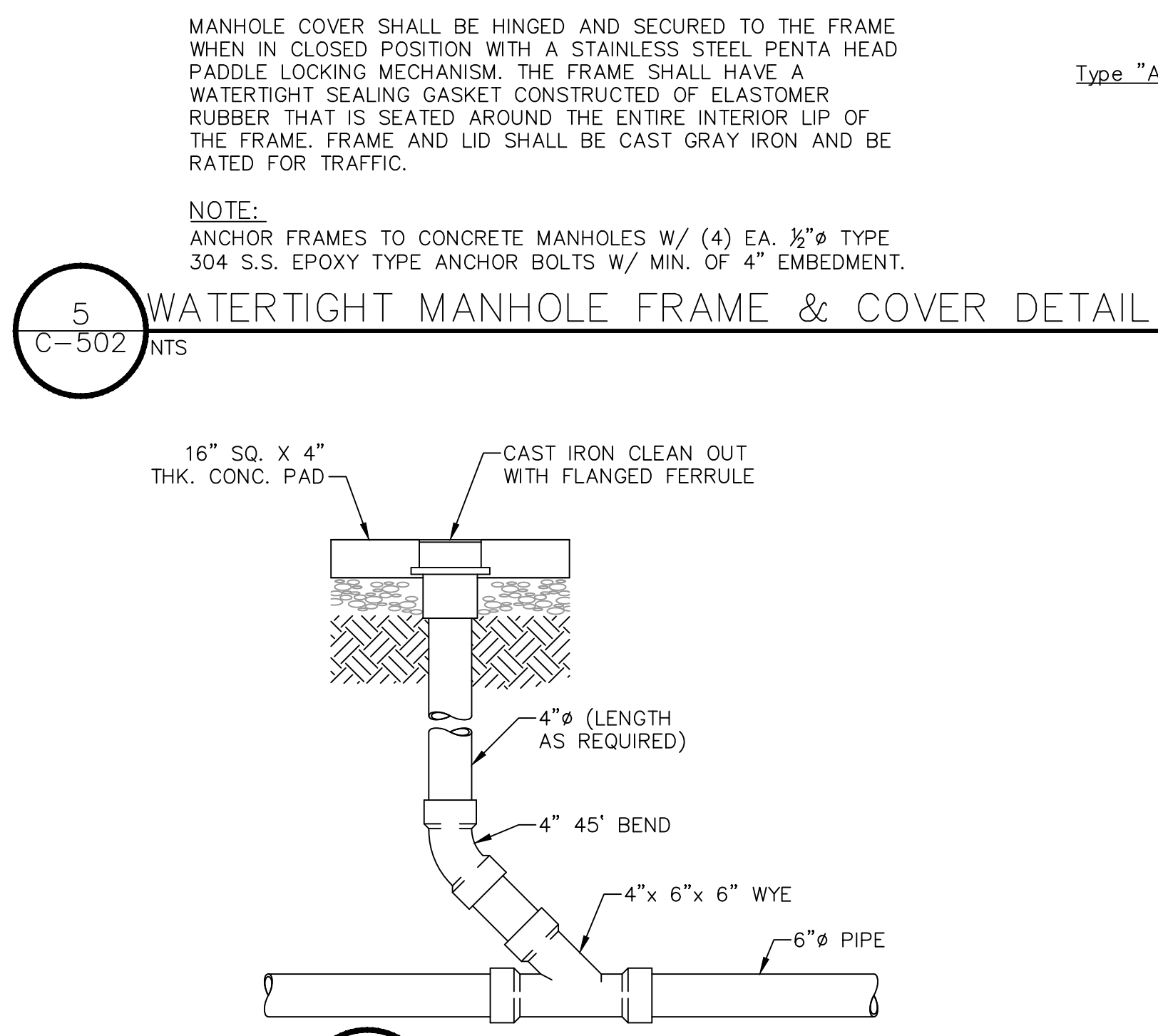
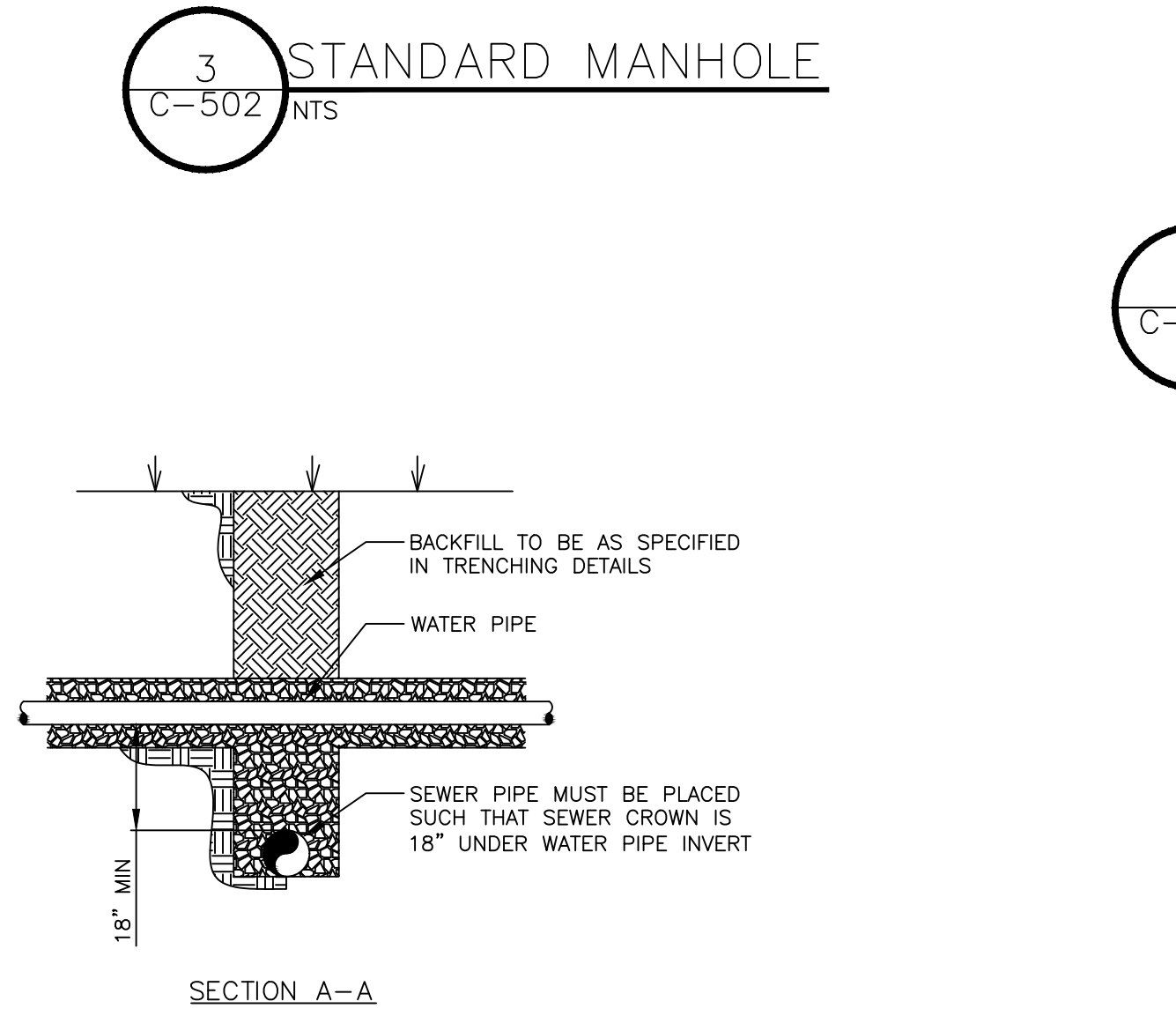
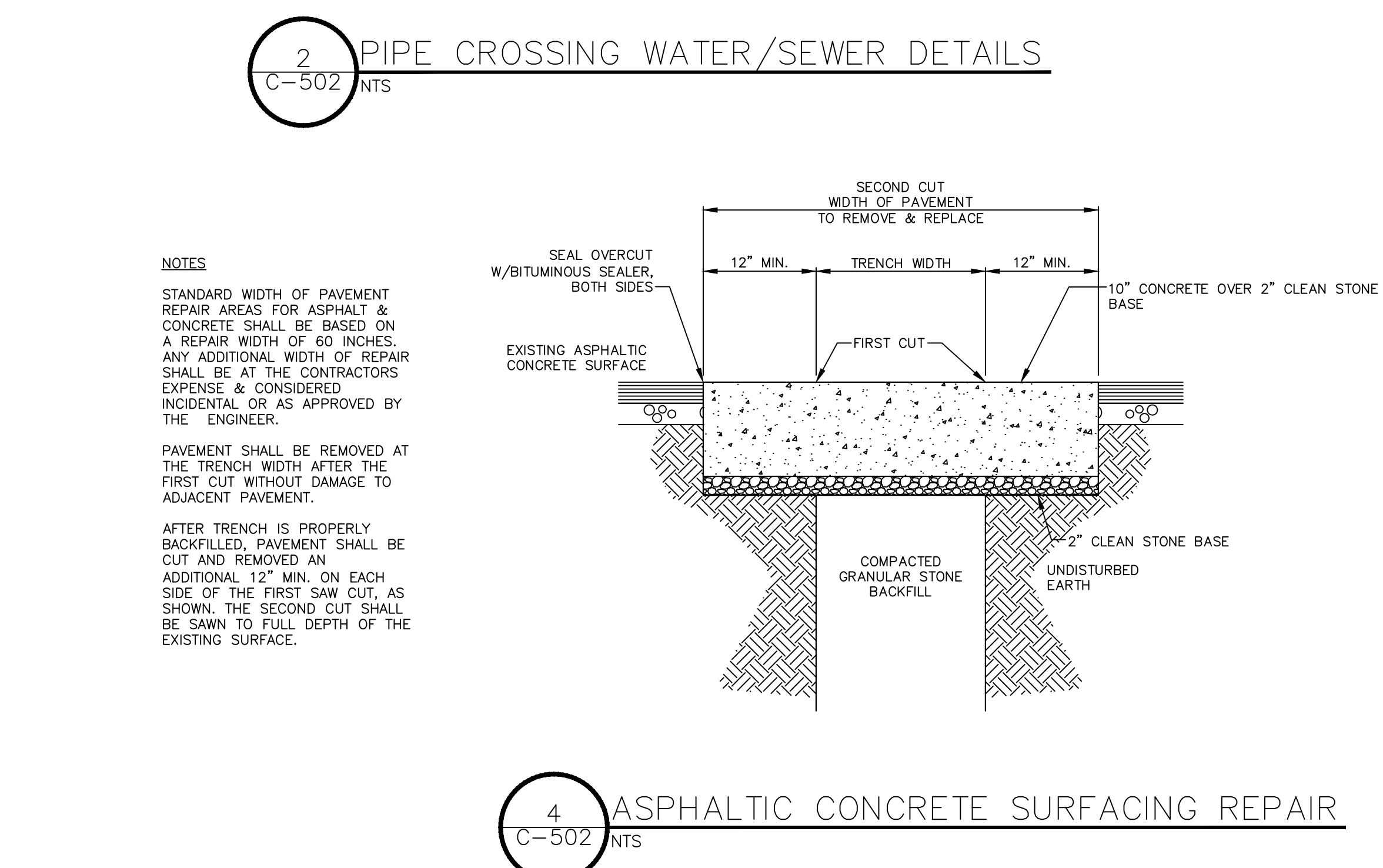
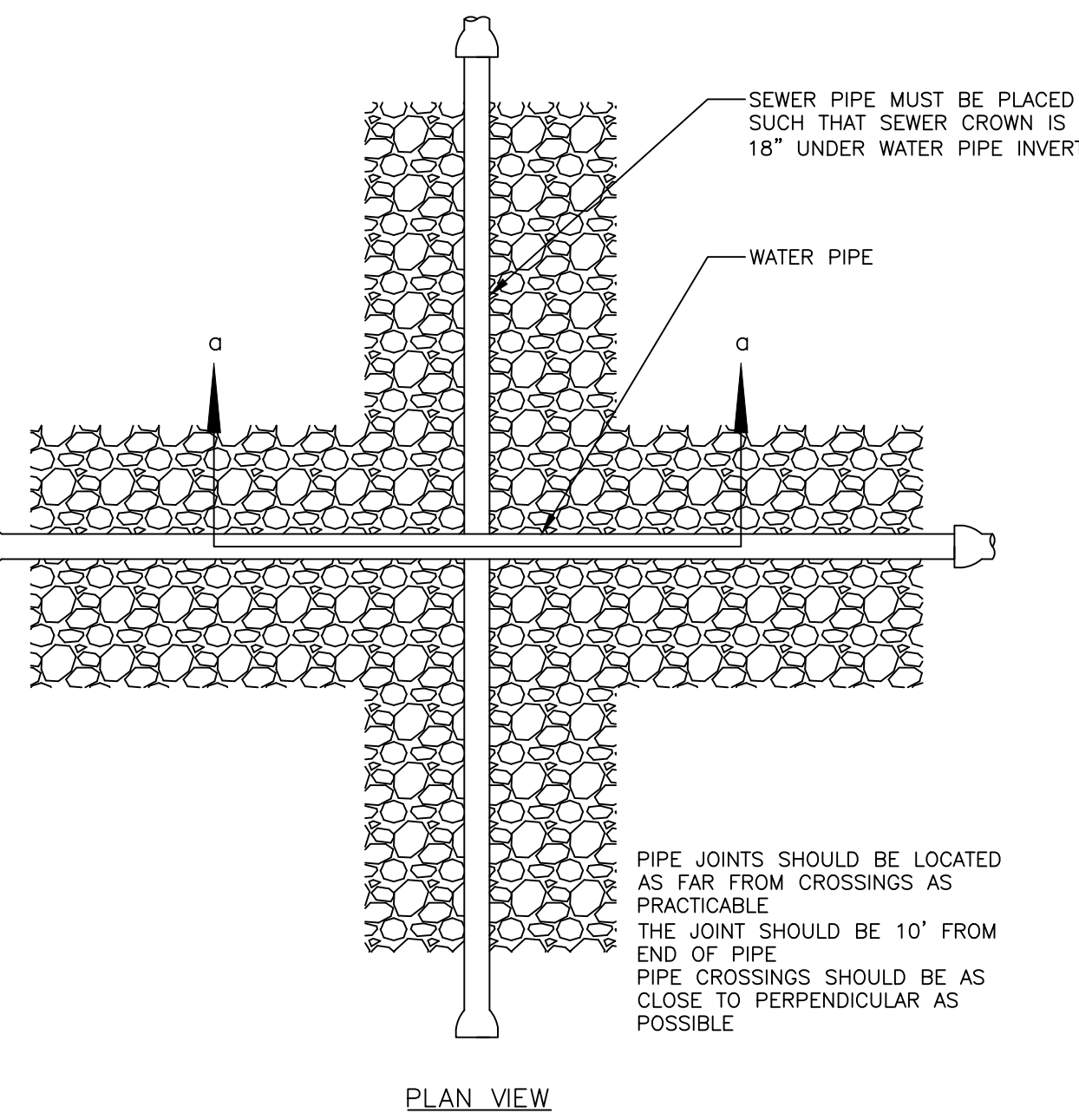
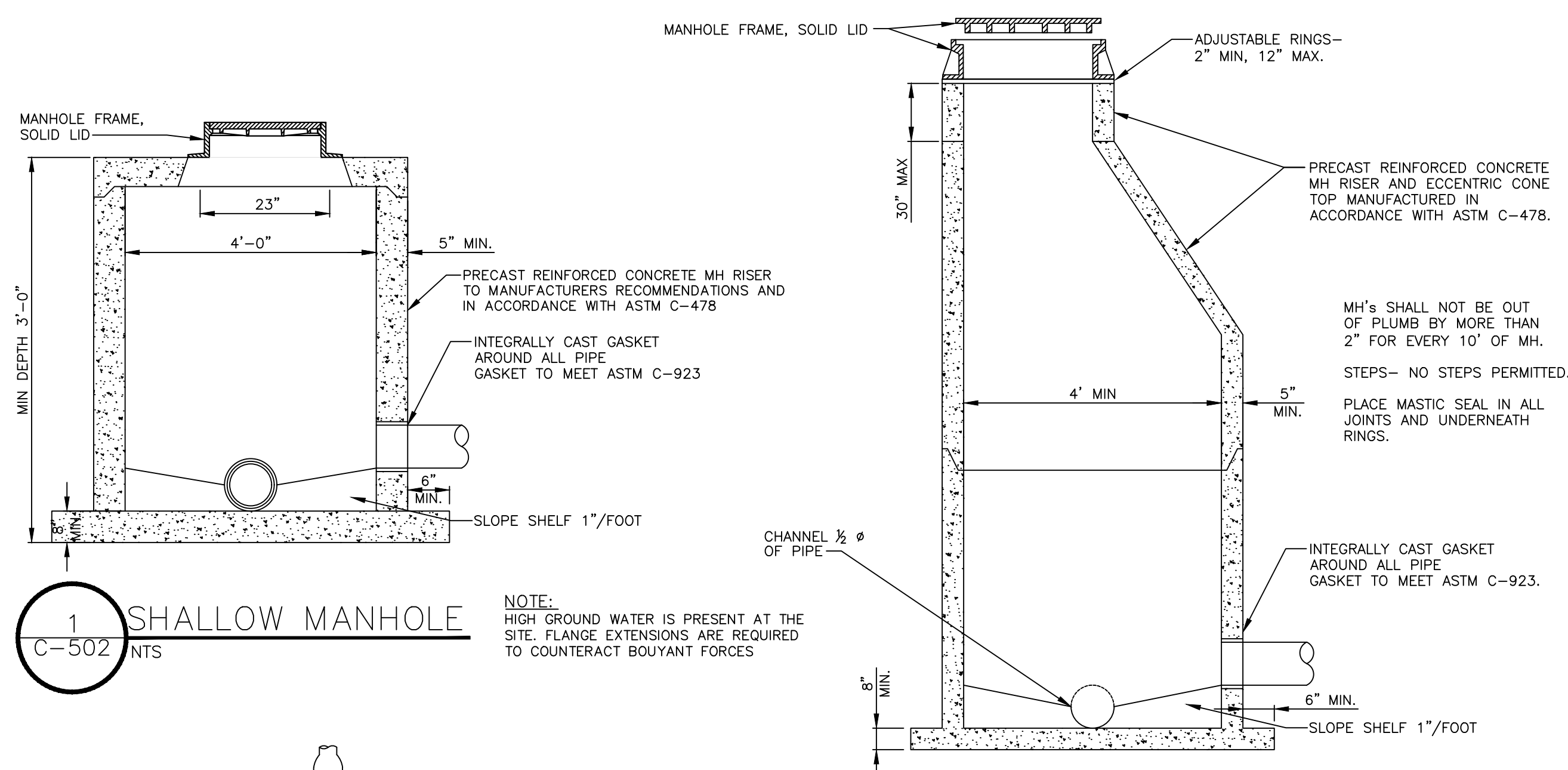
CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: AWW  
CHECKED BY: MCK  
DESIGNED BY: MCK

SHEET TITLE:  
**STANDARD  
CONSTRUCTION  
DETAILS**

SHEET NUMBER:

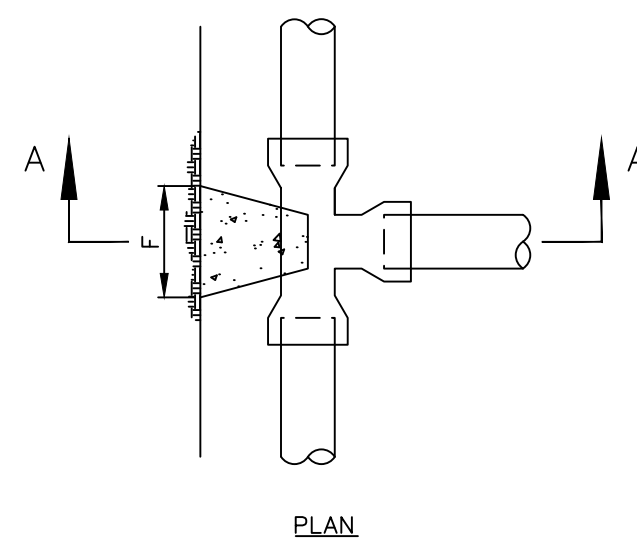
**C-502**

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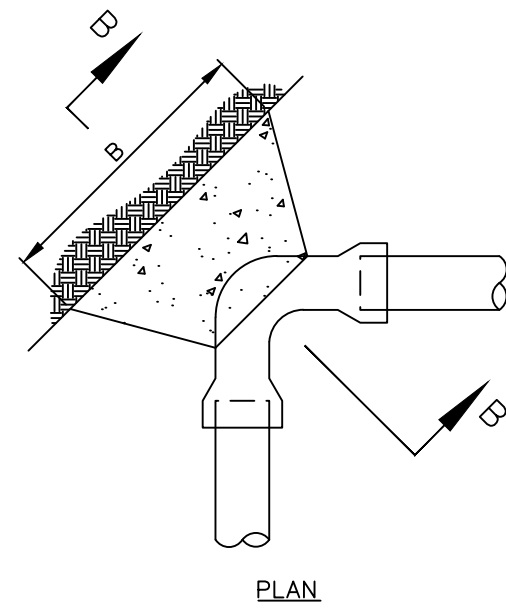




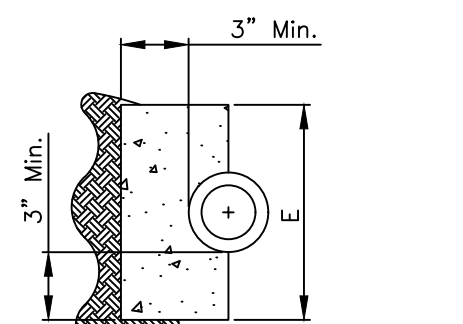
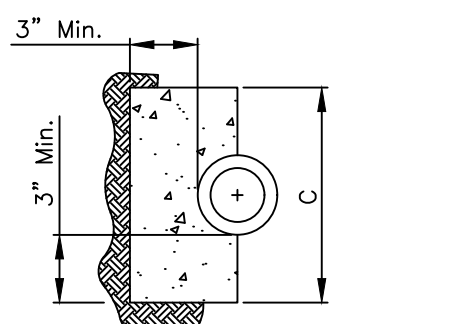
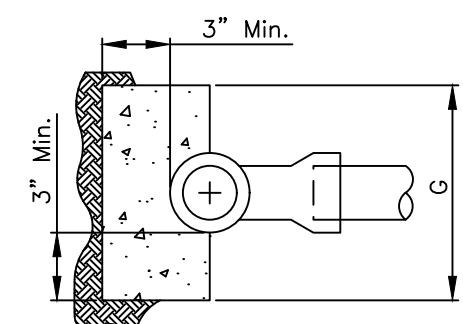
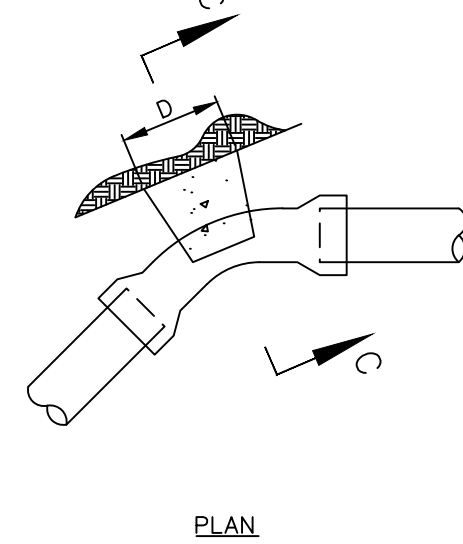
TEES & PRESSURE SHC'S



90° HORIZONTAL BENDS



11 1/4°, 22 1/2°, 45° HORIZONTAL AND LOWER VERTICAL BENDS

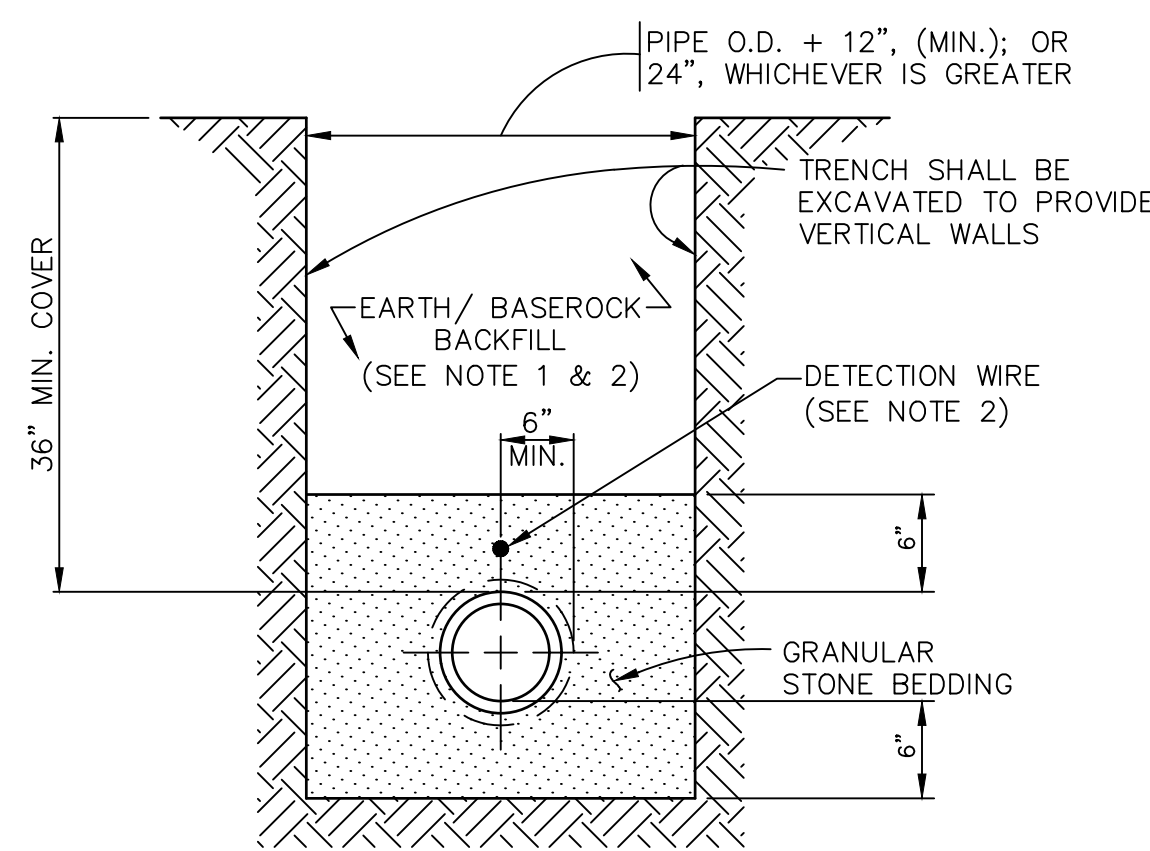


PIPE SIZE	B	C	D	E	F	G
1" THRU 1 1/2"	8"	8"	10"	5"	6"	6"
2"	10"	10"	14"	7"	10"	10"
2 1/2"	10"	10"	14"	7"	10"	10"
3"	12"	12"	18"	9"	12"	12"
4"	13"	12"	24"	12"	16"	16"

- NOTES:
- USE PLAIN CONCRETE
  - CARRY ALL BEARING SURFACES TO UNDISTURBED GROUND OR FIRM SUBGRADE.
  - BUTTRESS SIZED FOR 160 PSI
  - DO NOT ENCASE JOINTS
  - ONLY MIX WITH POTABLE WATER

1 THRUST BLOCKING

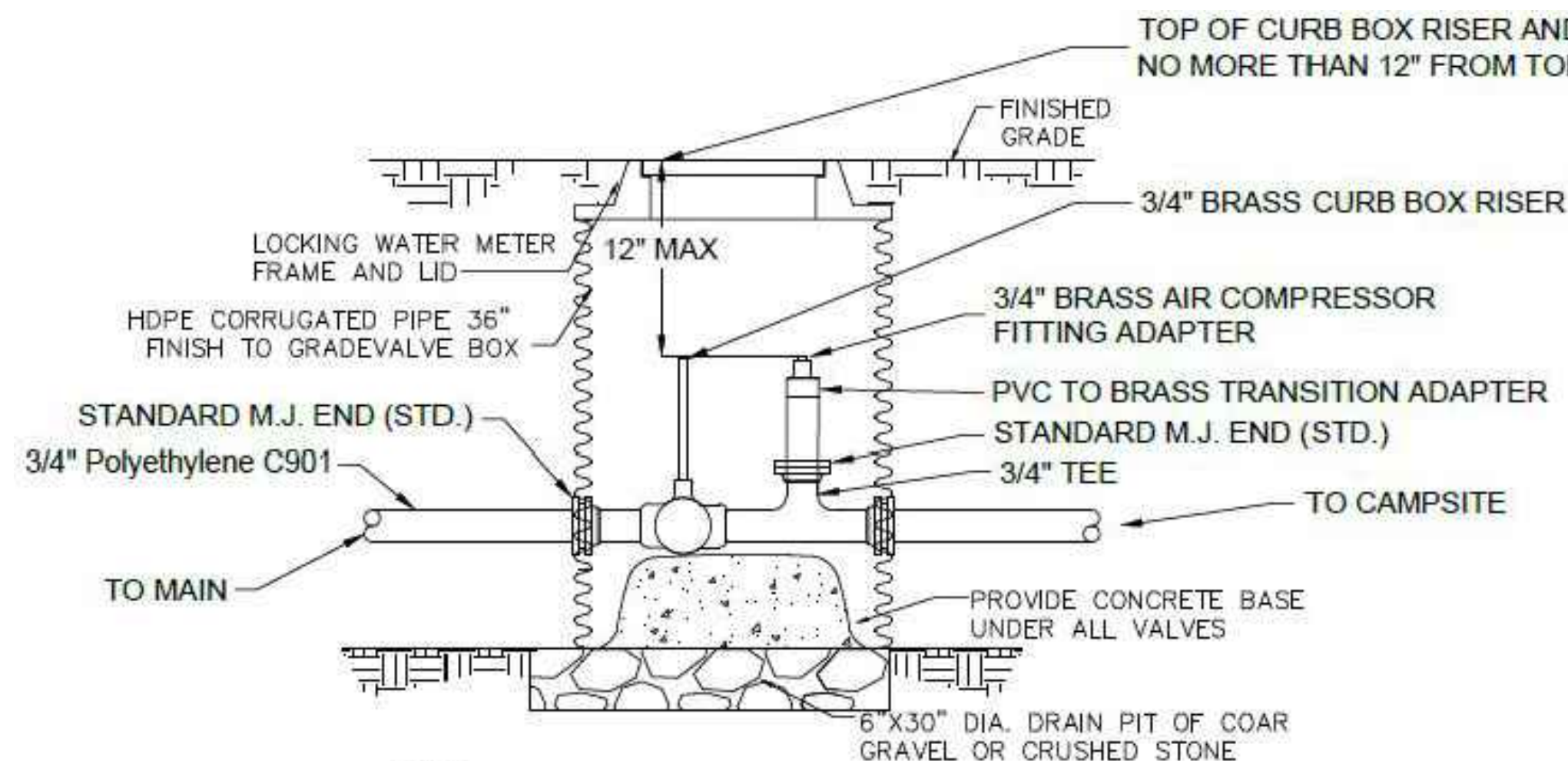
C-503 NTS



- NOTE:
- TRENCH SHALL BE BACKFILLED AND COMPACTED FULL DEPTH WITH GRANULAR STONE ON ALL ROAD CROSSINGS.
  - 12 GAUGE TRACER WIRE WITH LOCATING CLIP AT EACH VALVE SHALL BE PLACED IN TRENCH ALONG ENTIRE LENGTH OF PROPOSED PIPE.

2 WATER LINE TRENCH & BEDDING DETAIL

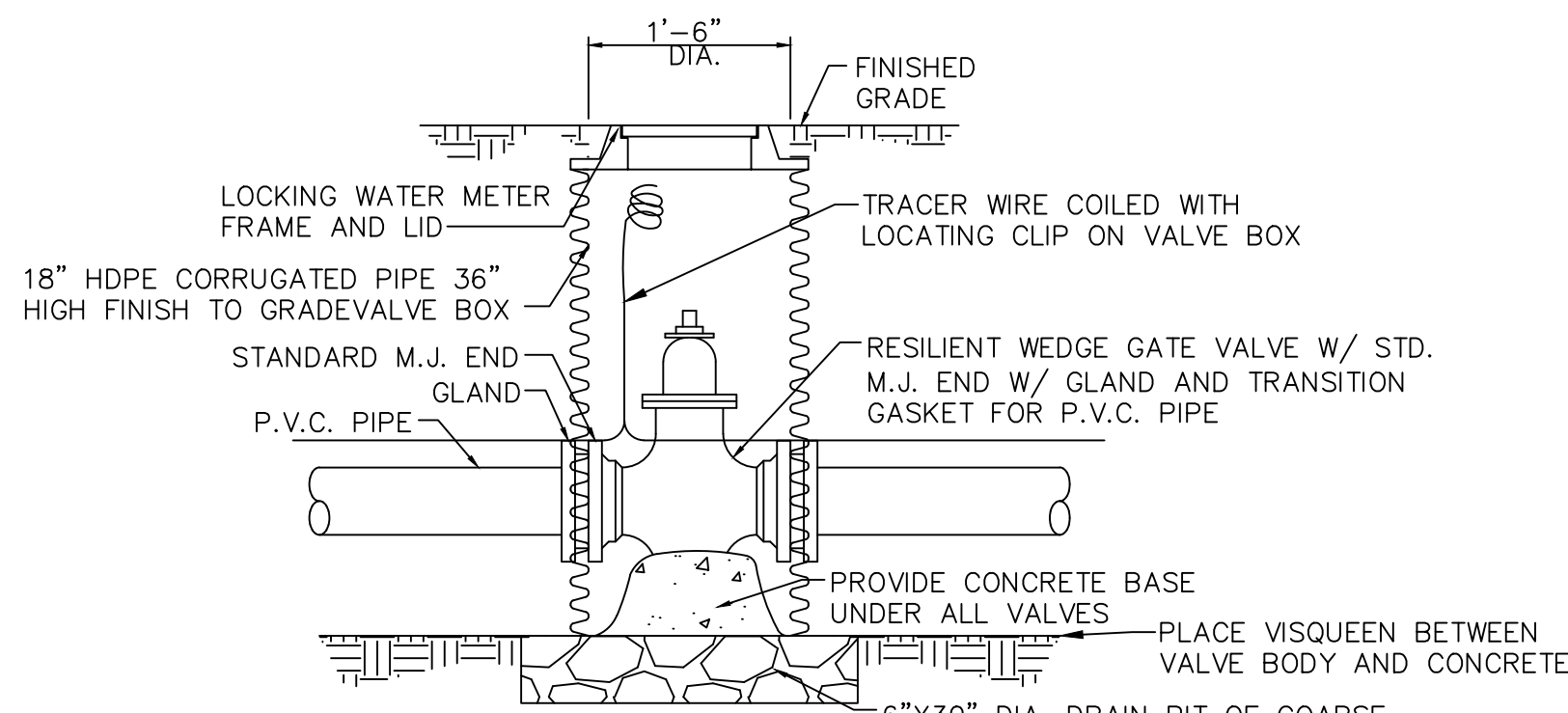
C-503 NTS



- NOTE:
- WHEN GATE VALVE IS INSTALLED IN EXISTING DUCTILE OR C.I. PIPE, REPLACE TRANSITION GASKET W/ STANDARD M.J. GASKET.

3 VALVE BOX - CAMPSITE

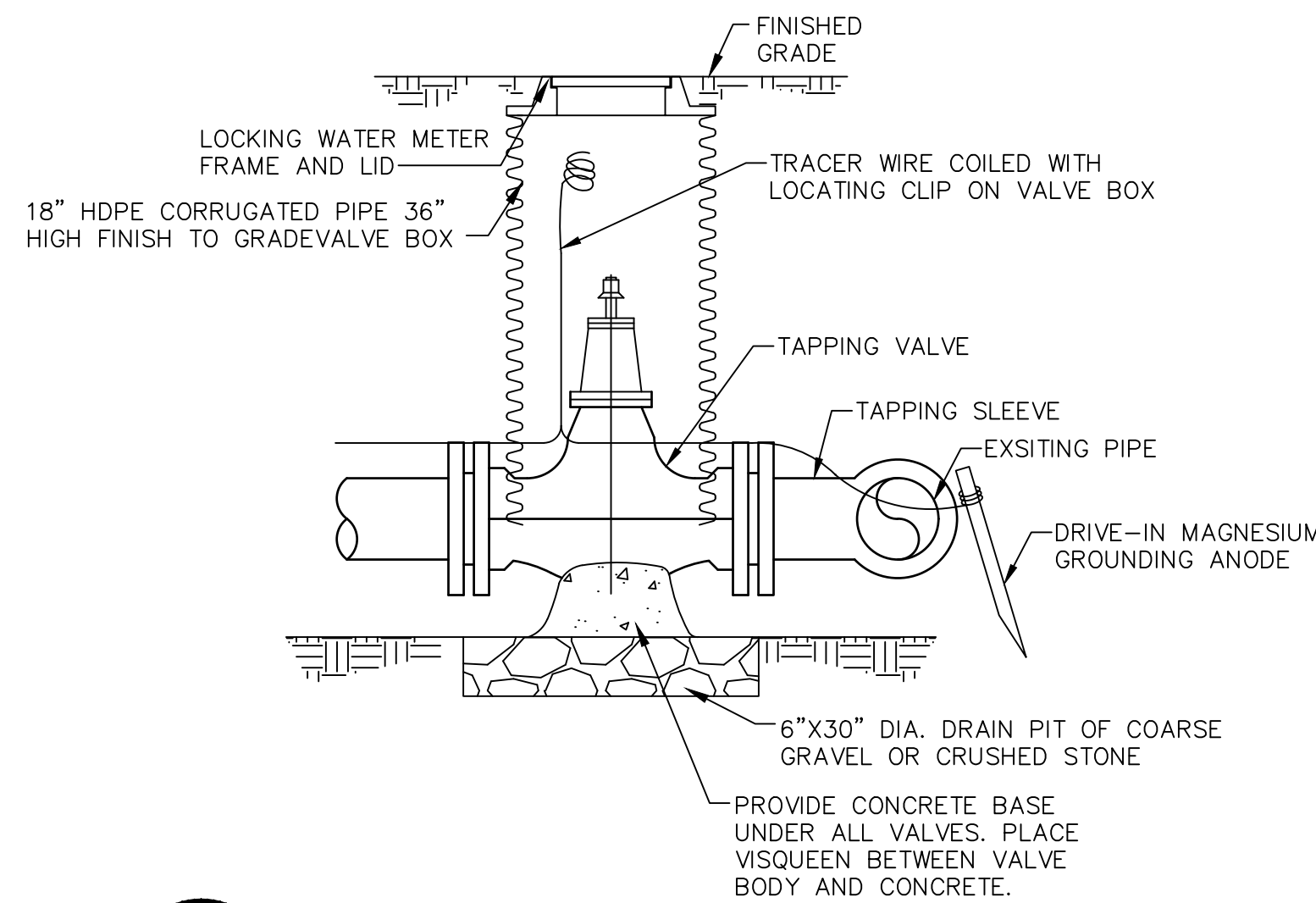
C-503 NTS



- NOTE:
- WHEN GATE VALVE IS INSTALLED IN EXISTING DUCTILE OR C.I. PIPE, REPLACE TRANSITION GASKET W/ STANDARD M.J. GASKET.

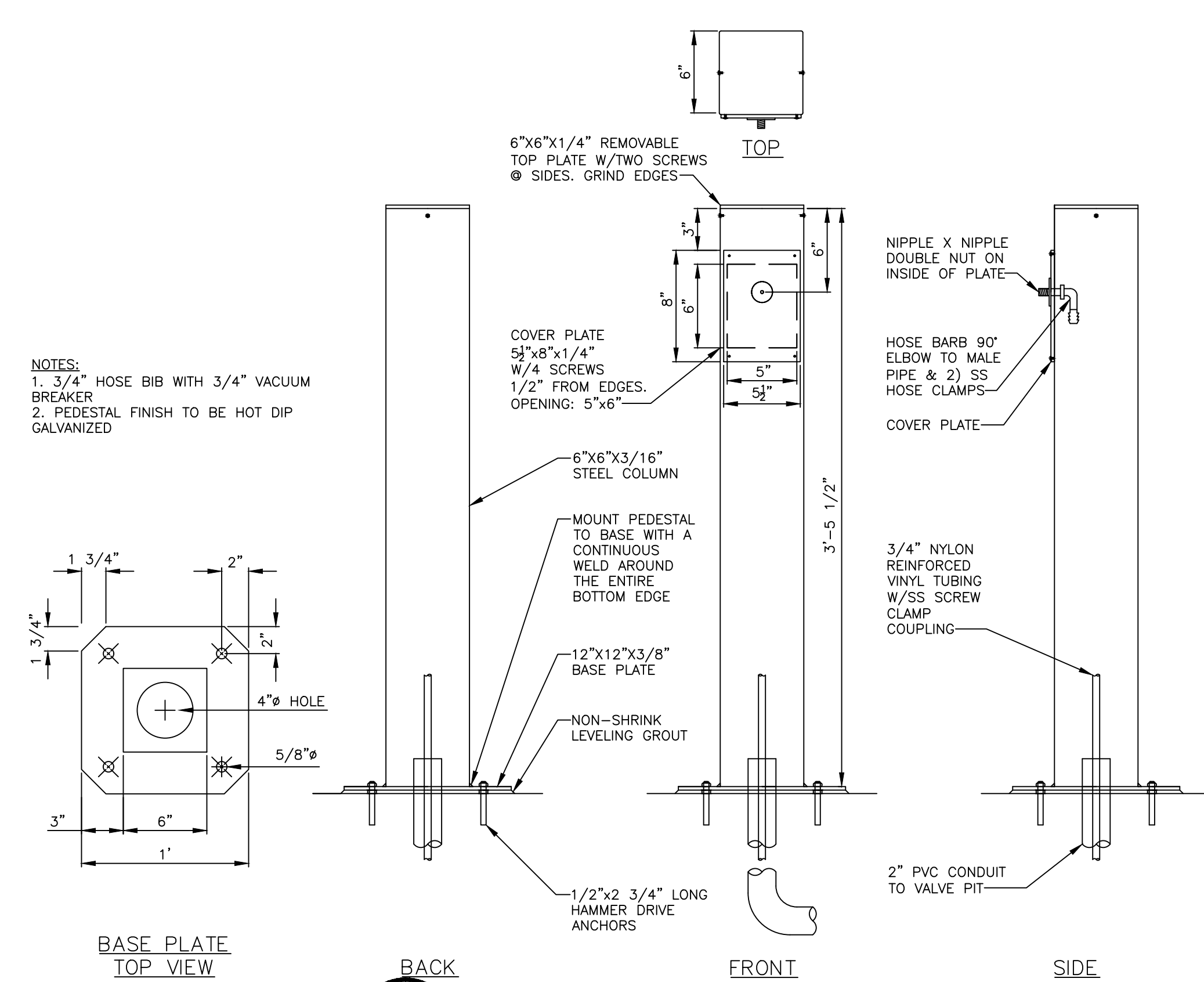
4 GATE VALVE INSTALLATION DETAIL

C-503 NTS



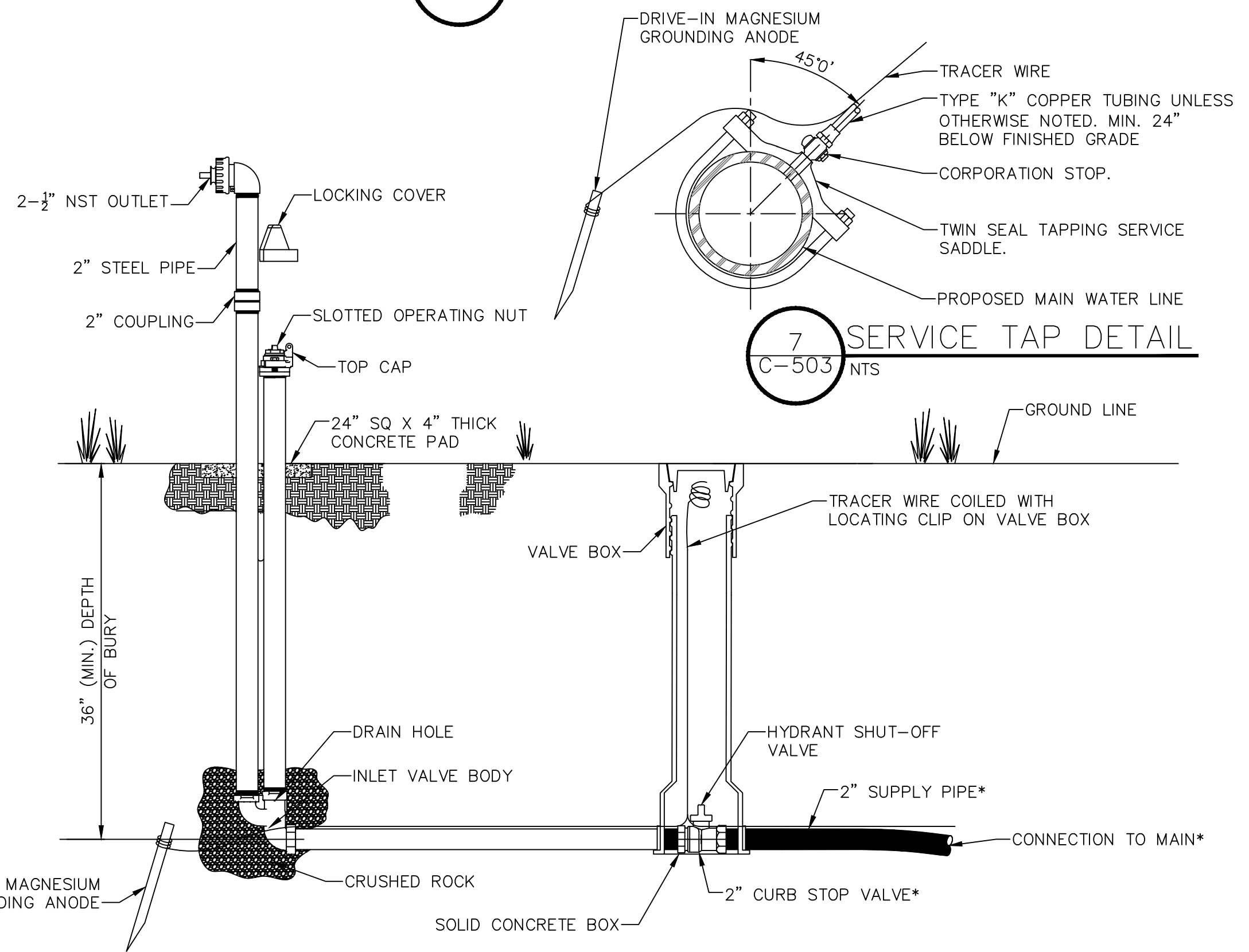
5 TAPPING VALVE & SLEEVE INSTALLATION

C-503 NTS



6 WATER PEDESTAL

C-503 NTS



7 SERVICE TAP DETAIL

C-503 NTS

8 BLOW-OFF HYDRANT

C-503 NTS

Note: Flush waterlines free of debris before installation

NOTE: ALL FITTINGS AND PIPE SHALL BE INCREASED TO 1 1/2" IN VALVE BOX FOR FUTURE CONNECTION AS SHOWN ON SHEET C-107.



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PROJECT # X2205-01  
SITE # 5309  
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REVISION:  
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ISSUE DATE:

CAD DWG FILE:  
DRAWN BY: AWW  
CHECKED BY: MCK  
DESIGNED BY: MCK

SHEET TITLE:

STANDARD  
CONSTRUCTION  
DETAILS

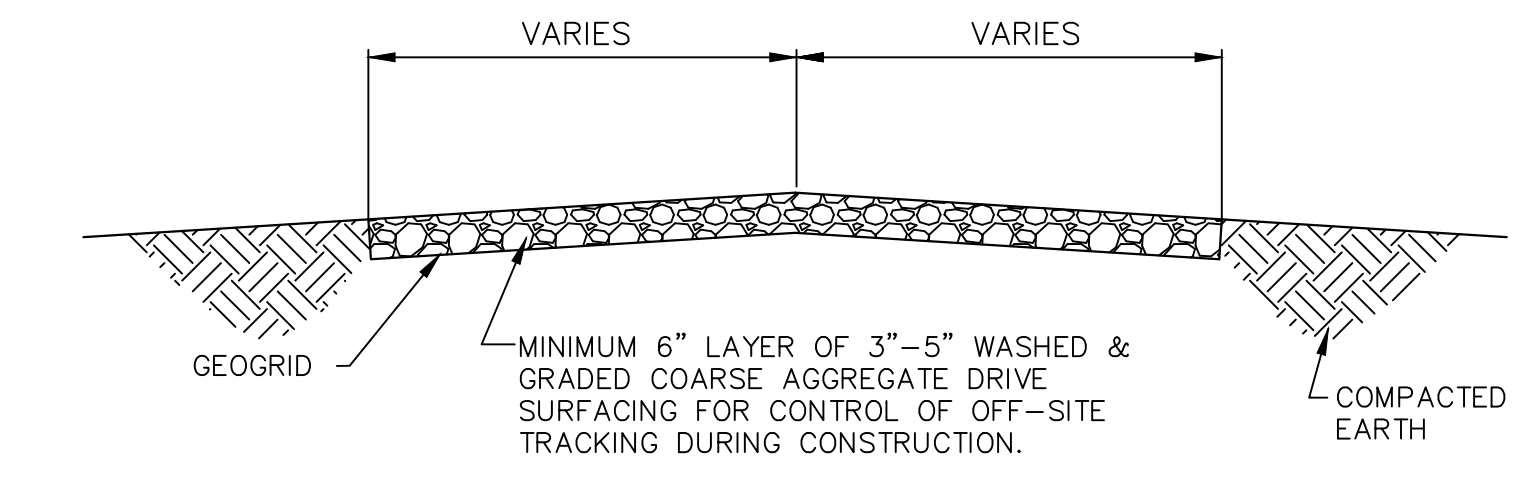
SHEET NUMBER:

C-503

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- NOTES:**
- CONTRACTOR SHALL LOCATE CONSTRUCTION ENTRANCES IN A LOCATION AS NECESSARY TO PREVENT OFFSITE VEHICLE TRACKING AND SHALL INDICATE LOCATION ON THE DRAWING.
  - CONTRACTOR SHALL INDICATE LOCATION OF CONCRETE WASHOUT BASIN ON DRAWING.

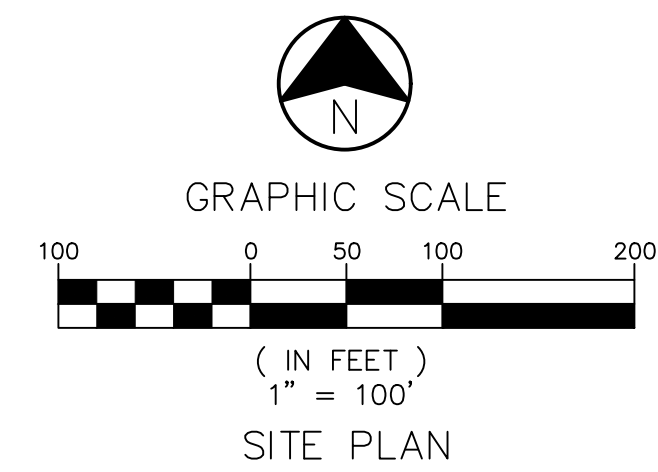


**TYPICAL SECTION THRU CONSTRUCTION ENTRANCE**  
NTS

- NOTES:**
- WHEN NECESSARY, EQUIPMENT/VEHICLES SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO A PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WITH DRAINAGE FLOWING AWAY FROM BOTH THE PUBLIC STREET OR ROAD AND THE STABILIZED ENTRANCE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
  - THE SITE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PAVED SURFACES. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS MAY REQUIRE. ALL SEDIMENT SPILLED, DROPPED, WASHED AWAY OR TRACKED ONTO PAVED SURFACES MUST BE REMOVED AS SOON AS POSSIBLE.
  - AREA IS PRONE TO FLOODING.

**LEGEND**

- EXISTING 1' CONTOUR
- EXISTING 5' CONTOUR
- COMPOST FILTER SOCK
- INSTALL CONSTRUCTION SITE ENTRANCE/EXIT DRIVE W/ MIN. 6" AGGREGATE, WASHED & GRADED, WITH NO FINES, PLACED ON TOP OF THE GEOGRID FOR CONTROL OF OFF-SITE SEDIMENT TRACKING DURING CONSTRUCTION ACTIVITIES
- COMPOST FILTER SOCK DITCH CHECK



**NOTE:**  
SEE SWPPP APPENDICES FOR ADDITIONAL INFORMATION AND REQUIRED INSPECTION AND REPORTING FORMS.

THE CONTRACTOR SHALL NAME AN INDIVIDUAL AS THE SITE ENVIRONMENTAL MANAGER RESPONSIBLE FOR ALL STORM WATER AND ENVIRONMENTAL ISSUES AT THE SITE DURING THE CONSTRUCTION OF THE PROJECT.

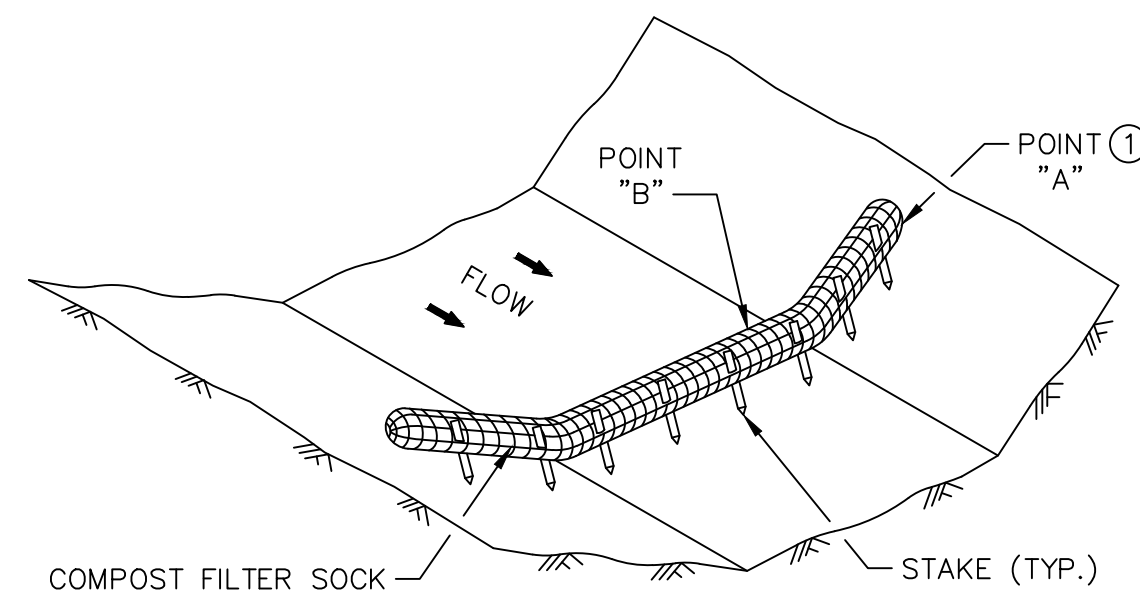
THE DESIGNATED ENVIRONMENTAL MANAGER FOR THE SITE IS:

THE CONTRACTOR SHALL PHYSICALLY MARK IN THE FIELD THE LOCATION OF THE OUTFALL AND INDICATE THE OUTFALL NUMBER, AS SHOWN ON THE EROSION CONTROL PLAN.

THE CONTRACTOR SHALL PENCIL IN AND KEEP CURRENT, ANY UPDATE AS NEEDED, ANY AND ALL ADDITIONS OR CHANGES TO THE STORM WATER POLLUTION PREVENTION PLAN ON THIS DRAWING, INCLUDING, BUT NOT LIMITED TO, THE LOCATION OF THE FOLLOWING ITEMS, IF APPLICABLE:

- CONSTRUCTION OFFICE
- PORTABLE TOILET(S)
- SOLID WASTE CONTAINER(S)
- FUEL STORAGE AREA
- MATERIAL STORAGE AREA(S)
- CHEMICAL STORAGE AREA(S)
- EQUIPMENT STORAGE AREA(S)
- TOP SOIL STOCKPILE AREA(S)
- ANY AND ALL ADDITIONAL INSTALLED BMP'S

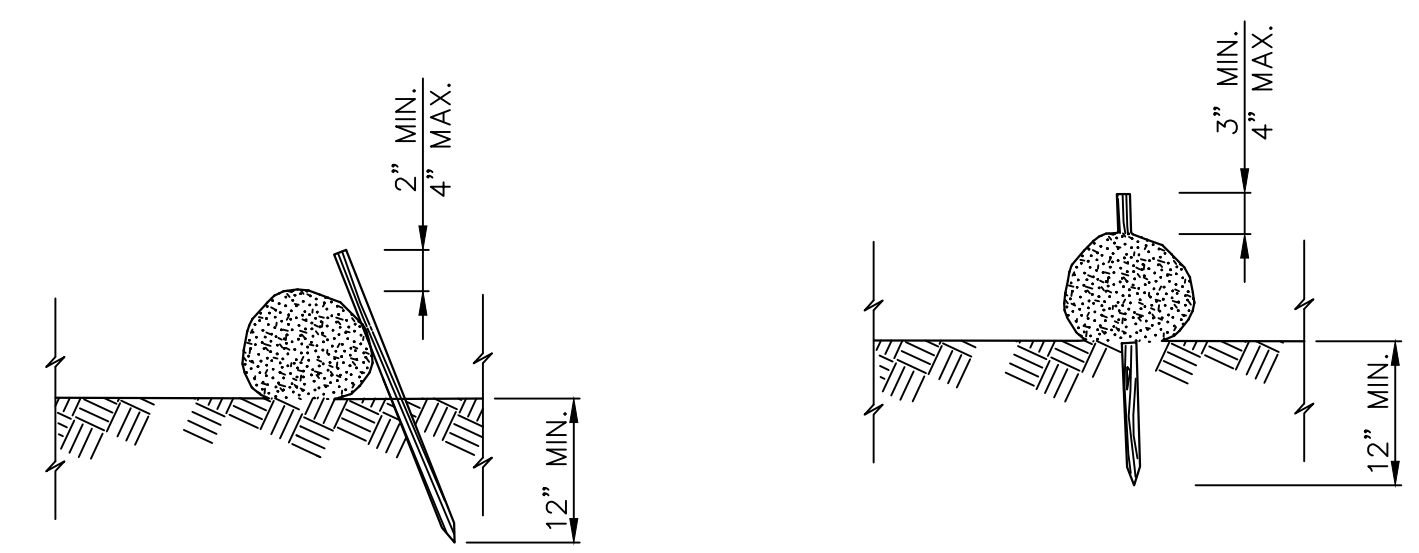
THE CONTRACTOR SHALL MAINTAIN A COPY OF THE MDNR ISSUED NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER DISCHARGE PERMIT, A CURRENT SIGNED AND CERTIFIED COPY OF THE SWPPP, AND COPIES OF ALL COMPLETED INSPECTION AND MAINTENANCE FORMS AT THE CONSTRUCTION SITE AT ALL TIMES, AS REQUIRED. THE ISSUED STORM WATER DISCHARGE PERMIT AND THE SWPPP MUST BE AVAILABLE FOR REVIEW BY ANY AND ALL LOCAL, STATE, OR FEDERAL AUTHORIZED REGULATORY AGENCY REPRESENTATIVE UPON REQUEST.



**NOTES:**

- ANCHORING STAKES SHALL BE SIZED, SPACED, AND BE OF A MATERIAL THAT EFFECTIVELY SECURES THE FILTER SOCK. STAKE SPACING SHALL BE A MAXIMUM OF THREE FEET.
- OVERLAP ENDS OF SOCK PER MANUFACTURERS RECOMMENDATIONS. (1' MIN. 3' MAX.)
- USE 8" TO 12" DIA. SOCK ON CURBSIDE IN TRAFFIC AREAS.
- USE 12" - 18" DIA. SOCK IN NON-TRAFFIC AREAS OR AREAS WHERE SAFETY IS NOT A CONCERN.
- SOCK SHALL BE PHOTODEGRADABLE, WILDLIFE FRIENDLY AND SHALL BE FILLED WITH COARSE COMPOST. (NO PLASTIC WEBBING)

**1 COMPOST FILTER SOCK DITCH CHECK**  
C-601 NTS



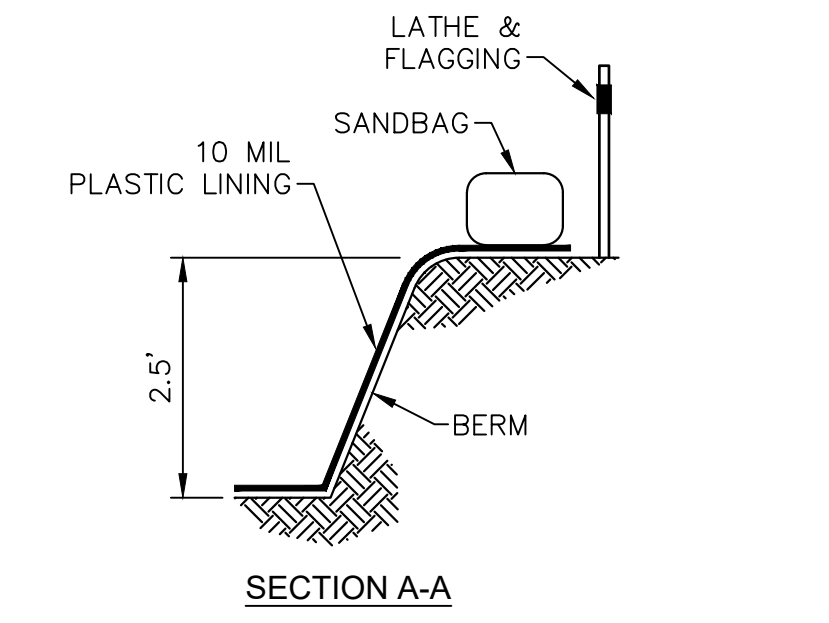
**ALTERNATIVE 1 (Staking)**  
N.T.S.

**ALTERNATIVE 2 (Staking)**  
N.T.S.

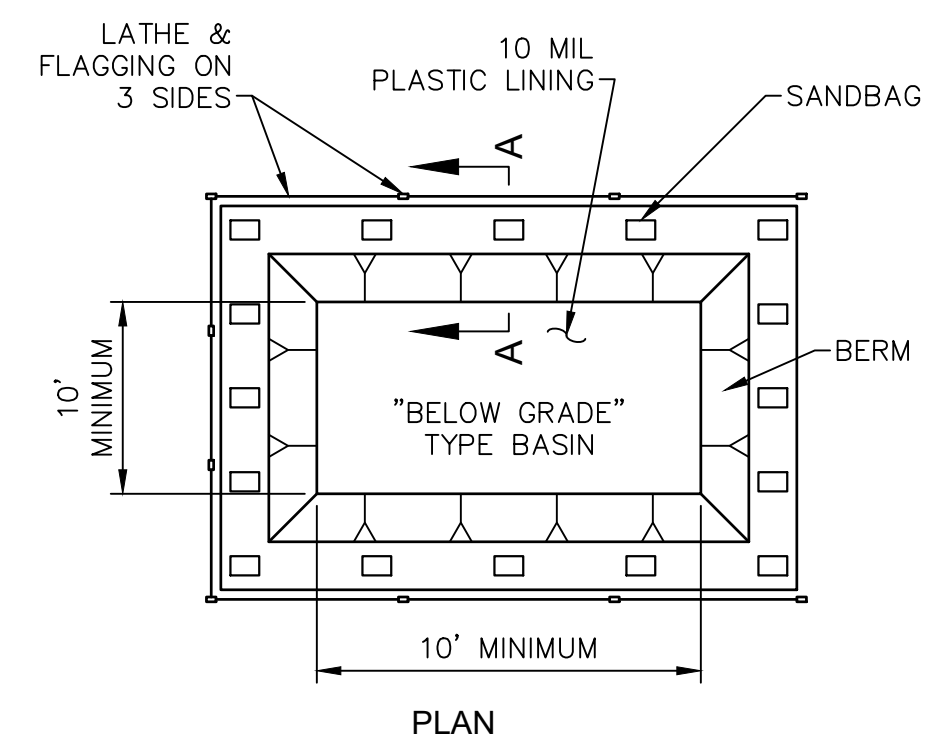
**2 COMPOST FILTER SOCK**  
C-601 NTS

COMPOST FILTER SOCK: SLOPE, SOCK SPACING, AND SOCK DIAMETER

SLOPE	SPACING (ft)	SOCK DIAMETER (inches)
<50:1	250	8
50:1 - 10:1	125	12
10:1 - 5:1	100	12
3:1 - 2:1	50	18
> 2:1	25	18



**SECTION A-A**



**PLAN**

**NOTES:**

- THE WASHOUT BASIN(S) SHALL BE CONSTRUCTED BEFORE THE ACTIVE BUILDING PHASE.
- THE WASHOUT BASIN(S) WILL BE INSPECTED DAILY TO ENSURE THAT ALL CONCRETE WASHING IS BEING DISCHARGED INTO THE WASHOUT BASIN(S). NO LEAKS OR TEARS ARE PRESENT, AND TO IDENTIFY WHEN CONCRETE WASTES NEED TO BE REMOVED. THE WASHOUT BASIN(S) WILL BE CLEANED OUT ONCE THE BASIN IS FILLED TO 75% OF THE HOLDING CAPACITY. ONCE THE BASIN'S HOLDING CAPACITY HAS BEEN REACHED THE CONCRETE WASTES WILL BE ALLOWED TO HARDEN, THE CONCRETE WILL BE BROKEN UP, REMOVED, AND TAKEN TO AN APPROPRIATE LANDFILL FOR DISPOSAL. THE PLASTIC SHEETING WILL BE REPLACED IF TEARS OCCUR DURING REMOVAL OF CONCRETE WASTES FROM THE WASHOUT BASIN(S).

**3 TYPICAL CONCRETE WASHOUT BASIN DETAIL**  
C-601 NTS



CIVIL ENGINEER: MICHAEL KEATON  
LICENSE NO. PE-2013019060



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OFFICE OF ADMINISTRATION  
DIVISION OF FACILITIES  
MANAGEMENT,  
DESIGN AND CONSTRUCTION

DEPARTMENT OF  
NATURAL RESOURCES  
MISSOURI STATE PARKS

RENOVATE CAMPGROUND  
FULL HOOK-UP SITES

ROARING RIVER  
STATE PARK  
12716 FARM ROAD 2239  
CASSVILLE, MISSOURI

PROJECT # X2205-01  
SITE # 5309  
ASSET # 7815309057

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_

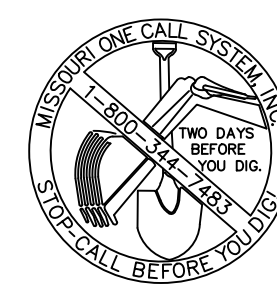
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CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: AWW  
CHECKED BY: MCK  
DESIGNED BY: MCK

SHEET TITLE:  
**EROSION  
CONTROL  
PLAN**

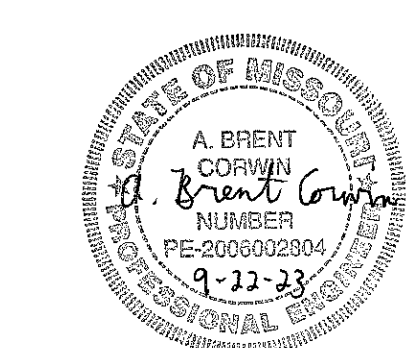
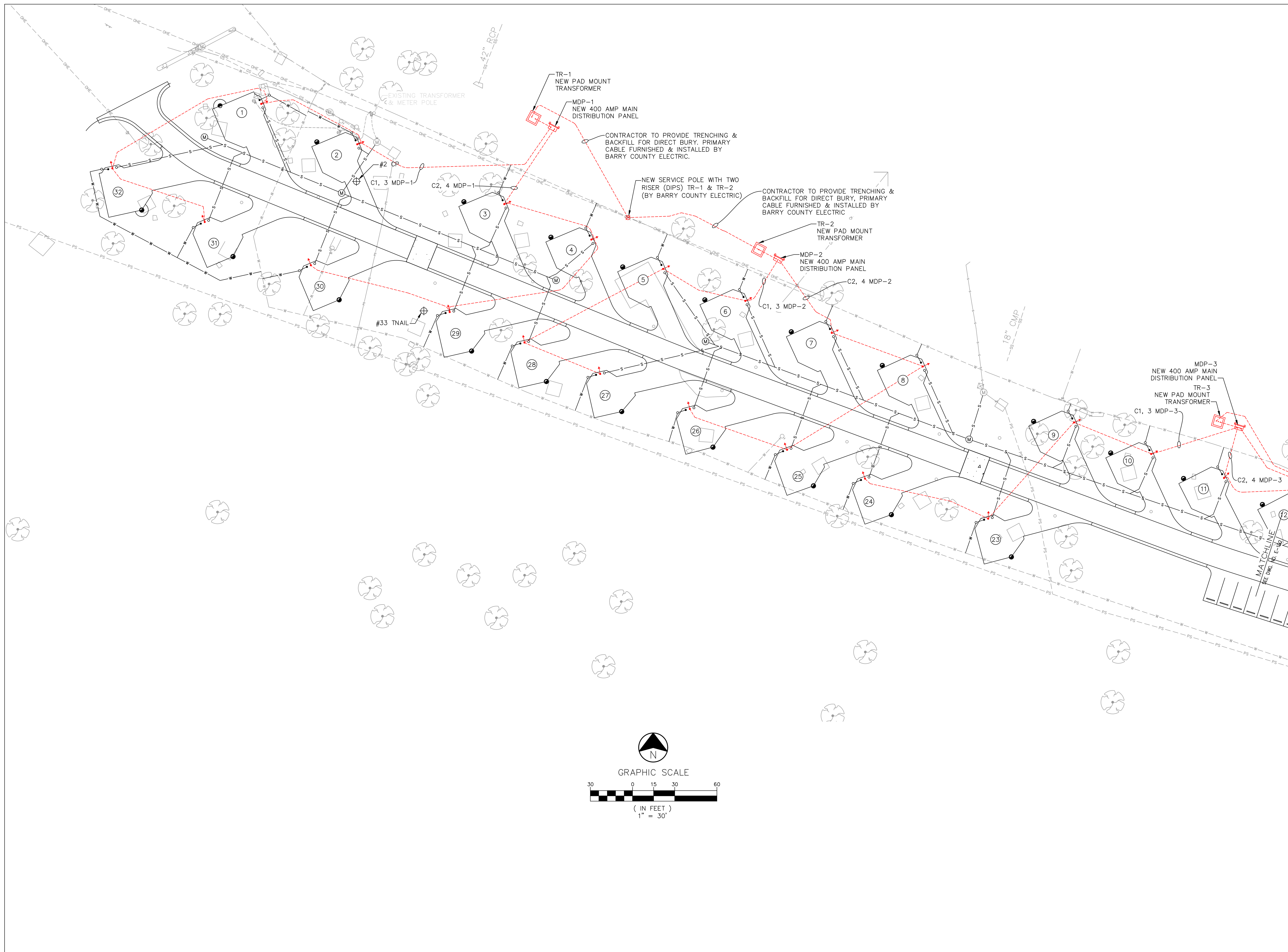
SHEET NUMBER:

**C-601**

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SEPTEMBER 22, 2023



THIS DRAWING IS FOR A STORM WATER POLLUTION PREVENTION PLAN ONLY, AND IS NOT INTENDED TO BE USED FOR CONSTRUCTION PURPOSES.



CIVIL ENGINEER: BRENT CORWIN  
LICENSE NO. PE-200602804



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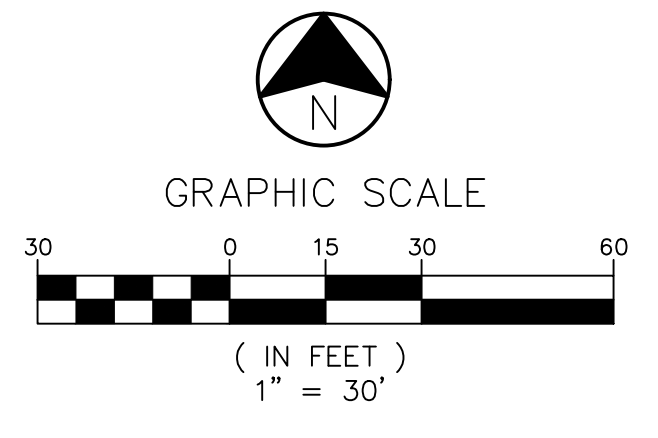
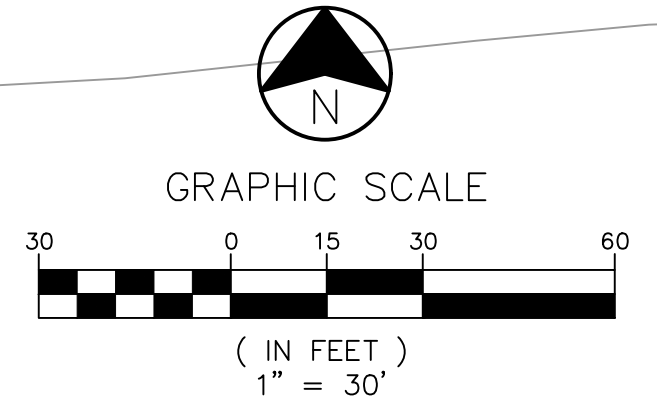
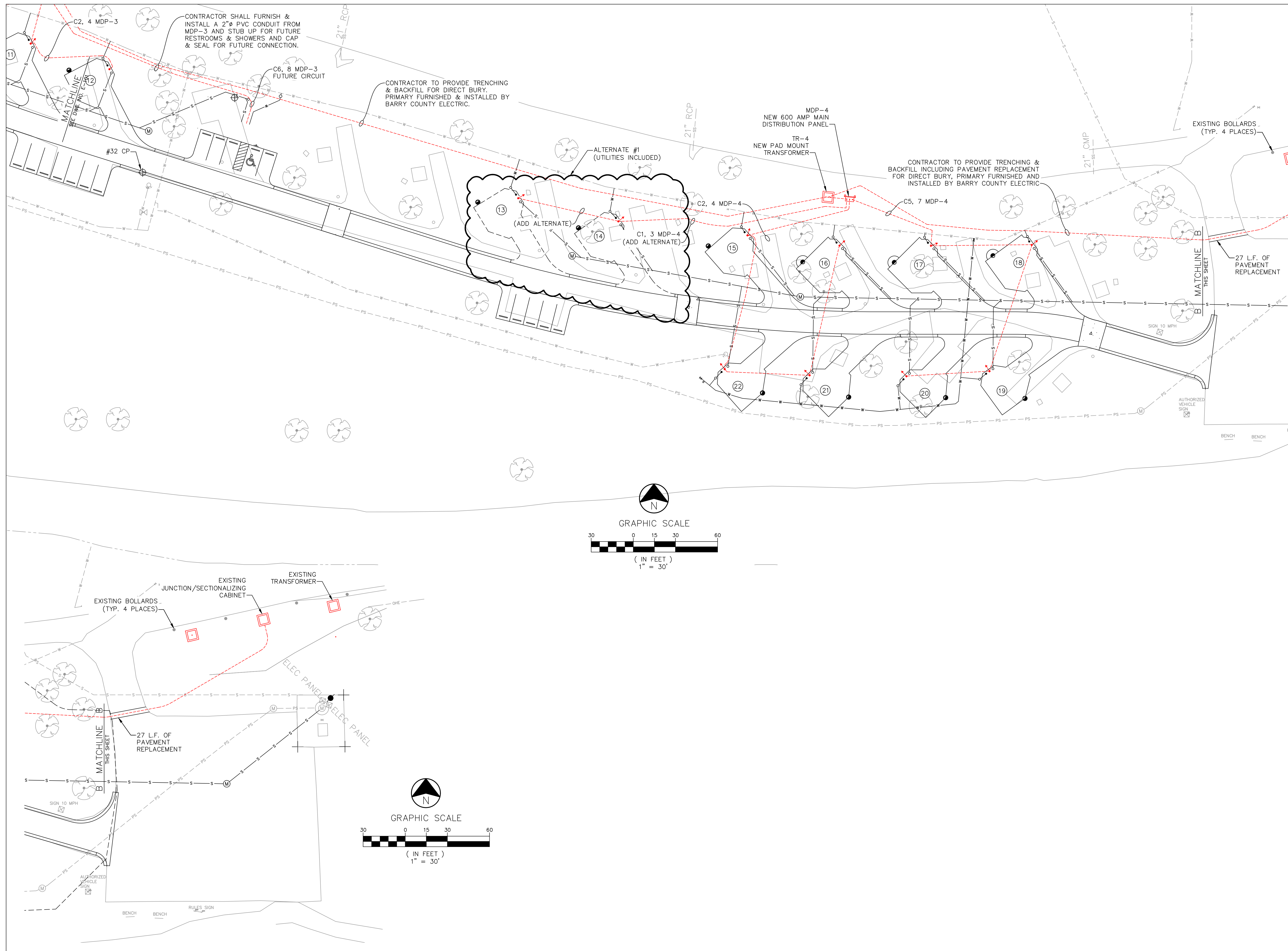
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CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: AWW  
CHECKED BY: MCK  
DESIGNED BY: ABC

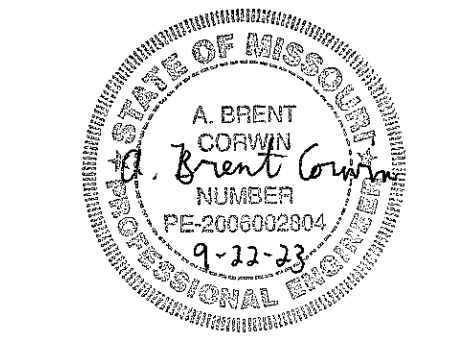
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**PROPOSED  
ELECTRICAL PLAN**

SHEET NUMBER:

**E-101**



STATE OF MISSOURI  
MICHAEL L. PARSON,  
GOVERNOR



CIVIL ENGINEER: BRENT CORWIN  
LICENSE NO. PE-2006022804



ALLGIEIER, MARTIN and ASSOCIATES, INC.  
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221 EAST 3RD STREET, JOPLIN, MISSOURI 64801-1500

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REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: \_\_\_\_\_

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: AWW  
CHECKED BY: MCK  
DESIGNED BY: ABC

SHEET TITLE:  
**PROPOSED  
ELECTRICAL PLAN**

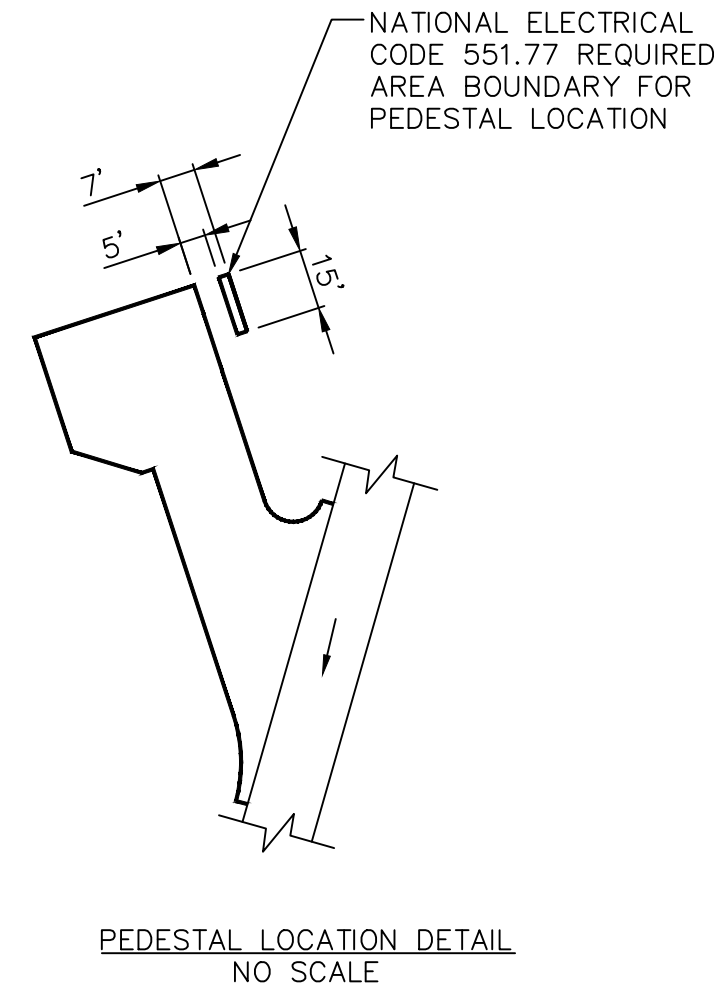
SHEET NUMBER:

**E-102**

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PEDESTAL HEIGHT SCHEDULE			
CAMPSITE NO.	HEIGHT	CAMPSITE NO.	HEIGHT
**1	4'-6"	*17	3'-4"
2	5'-6"	*18	3'-4"
3	5'-0"	19	5'-0"
4	5'-0"	20	5'-0"
5	5'-0"	21	5'-6"
6	5'-0"	22	5'-10"
7	5'-0"	23	5'-10"
8	5'-0"	24	5'-10"
9	5'-6"	25	5'-6"
10	5'-10"	26	5'-6"
11	5'-10"	27	5'-6"
12	5'-10"	28	5'-6"
13	5'-0"	29	5'-0"
14	5'-0"	30	5'-10"
15	5'-0"	31	5'-10"
*16	3'-4"	**32	5'-0"

\* ACCESSIBLE SITE  
\*\* HOST SITE



DISTRIBUTION PANELBOARD		MDP1 PANEL SCHEDULE		10K AIC BREAKER		
NEMA 3/12 ENCLOSURE		400A MAIN BREAKER, TOP FEED		120/240V, 1-PHASE		
SQUARE D I-LINE						
DESCRIPTION	CIR.	POLE/AMP	WIRE	WIRE	POLE/AMP	DESCRIPTION
SITE 1, 2, 31, 32	1, 3	2/200	(3) #6 - (1) #4	(3) #6 - (1) #4	2/200	2, 4 SITE 3, 4, 29, 30

DISTRIBUTION PANELBOARD		MDP2 PANEL SCHEDULE		10K AIC BREAKER		
NEMA 3/12 ENCLOSURE		400A MAIN BREAKER, TOP FEED		120/240V, 1-PHASE		
SQUARE D I-LINE						
DESCRIPTION	CIR.	POLE/AMP	WIRE	WIRE	POLE/AMP	DESCRIPTION
SITE 5, 6, 27, 28	1, 3	2/200	(3) #6 - (1) #4	(3) #6 - (1) #4	2/200	2, 4 SITE 7, 8, 25, 26

DISTRIBUTION PANELBOARD		MDP3 PANEL SCHEDULE		10K AIC BREAKER		
NEMA 3/12 ENCLOSURE		400A MAIN BREAKER, TOP FEED		120/240V, 1-PHASE		
SQUARE D I-LINE						
DESCRIPTION	CIR.	POLE/AMP	WIRE	WIRE	POLE/AMP	DESCRIPTION
SITE 9, 10, 23, 24	1, 3	2/200	(3) #6 - (1) #4	(3) #2 - (1) #6	2/100	2, 4 SITE 11, 12
				(1) 2" Ø COND. NO WIRE	2/200	6, 8 FUTURE SHOWER/RESTROOMS

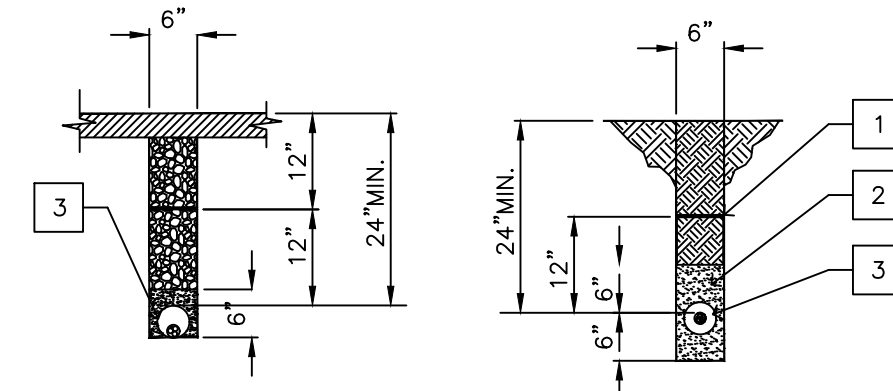
DISTRIBUTION PANELBOARD		MDP4 PANEL SCHEDULE		10K AIC BREAKER		
NEMA 3/12 ENCLOSURE		600A MAIN BREAKER, TOP FEED		120/240V, 1-PHASE		
SQUARE D I-LINE						
DESCRIPTION	CIR.	POLE/AMP	WIRE	WIRE	POLE/AMP	DESCRIPTION
SITE 13, 14 (ADD ALT.)	1, 3	2/100	(3) #2 - (1) #6	(3) #6 - (1) #4	2/200	2, 4 SITE 15, 16, 21, 22
SITE 17, 18, 19, 20	5, 7	2/200	(3) #6 - (1) #4			

**UNDERGROUND CONDUIT NOTES**

- DETECTABLE PLASTIC WARNING TAPE, SETON 85508 OR EQUAL, 12" BELOW GRADE.
- SAND, OR, LIMESTONE SCREENINGS.
- PVC CONDUIT AND CONDUCTORS FROM MDP1-4 TO PEDESTALS.

**50A PEDESTAL NOTES**

- MILBANK, SIEMENS, MIDWEST OR AN APPROVED EQUAL, 50/30/20 (GFI RECEPTACLE) EARTH BURIAL ELECTRICAL PEDESTAL, UNMETERED, PRE-WIRED FROM LOOP LUGS TO CIRCUIT BREAKERS AND RECEPTACLES FOR ADA SITES ONLY.
- ALTERNATE CONNECTION OF PHASE "A" AND "B" BETWEEN THE LEFT AND RIGHT LUGS OF ADJACENT PEDESTALS.
- 0.625" x 8" COPPER CLAD GROUND ROD AT EVERY PEDESTAL.

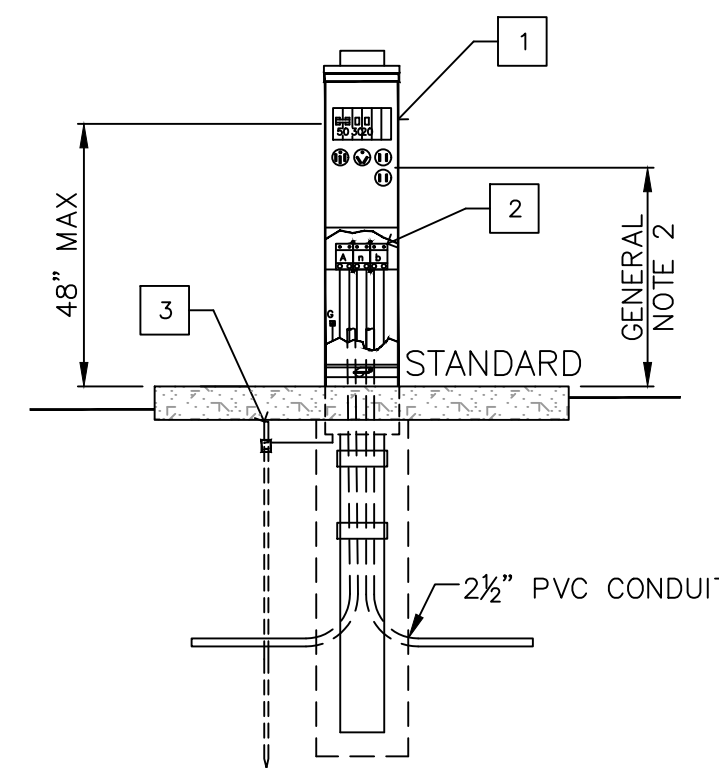


**GENERAL NOTES:**

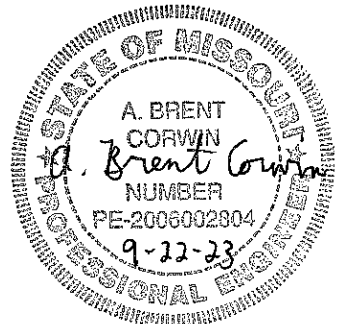
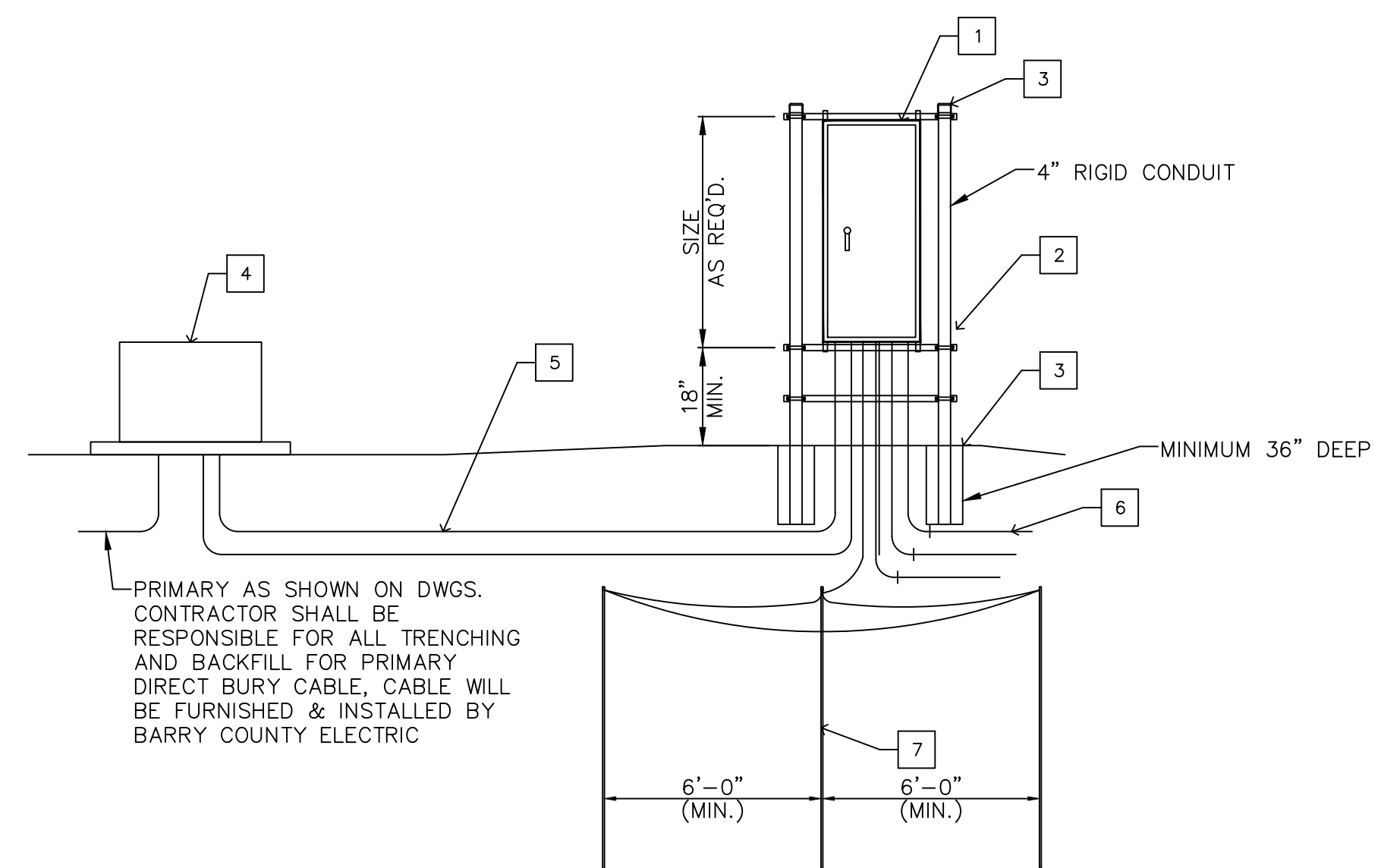
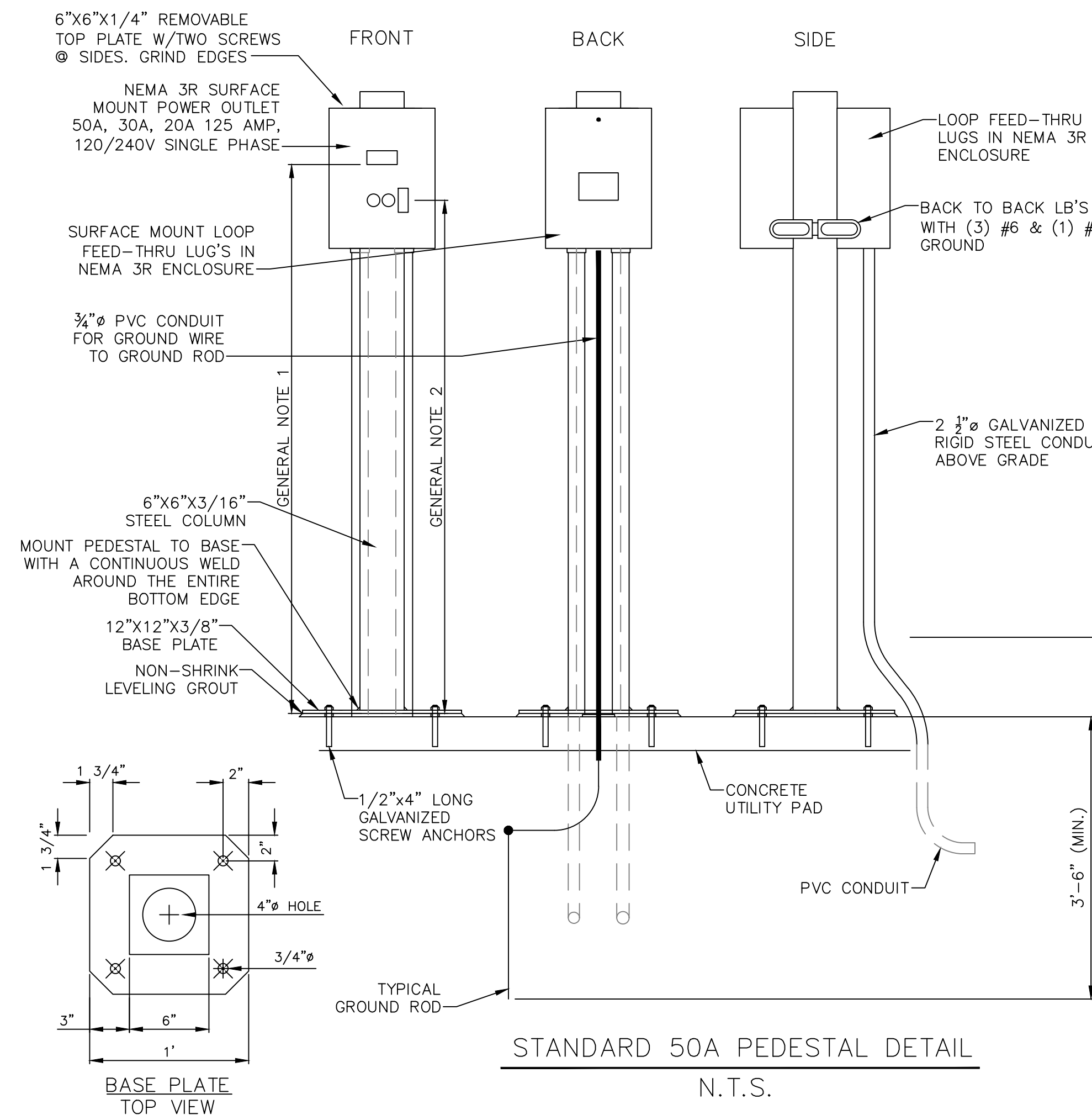
- 6'-6" MAX TO OPERABLE PARTS PER NEC FOR STANDARD SITES. 48" MAX TO OPERABLE PARTS FOR ACCESSIBLE SITES.
- REFER TO PEDESTAL HEIGHT SCHEDULE FOR MINIMUM DISTANCE TO OPERABLE PARTS. NEC AND ADA STANDARDS SHALL GOVERN WHEN IN CONFLICT.
- PEDESTAL TO BE HOT DIP GALVANIZED.

**MDP-1, MDP-2, MDP-3 & MDP-4 RISER DIAGRAM NOTES**

- MAIN BREAKER DISTRIBUTION PANELBOARD. SEE PANEL SCHEDULES.
- 12 GAUGE GALVANIZED B2B2B DOUBLE SOLID STRUT, STAINLESS STEEL 0.5" NUTS AND BOLTS, AND CONDUIT CLAMPS. SUPPORT PANELBOARD FROM FACTORY EARS.
- 12" DIA SONATUBE CONCRETE BASE W/ 4" DIA RIGID CONDUIT SUPPORT. PROVIDE THREADED END CAP.
- UTILITY TRANSFORMER AND CONCRETE PAD (BY BARRY COUNTY ELECTRIC)
- 400A SERVICE: (1) SET OF (3) 600 Kcmil CU THWN IN (1) 4" SCHEDULE 80 PVC CONDUIT GALVANIZED & RIGID ELBOWS. LEAVE CONDUCTOR TAILS AT TRANSFORMER FOR CONNECTION BY UTILITY COMPANY.
- 600A SERVICE: (2) SETS OF (3) 350 Kcmil CU THWN IN (2) 4" SCHEDULE 80 PVC CONDUIT GALVANIZED & RIGID ELBOWS. LEAVE CONDUCTOR TAILS AT TRANSFORMER FOR CONNECTION BY UTILITY COMPANY.
6. BRANCH CIRCUITS. (3) #2 CU THWN (1) #6 CU THWN W/ 1 1/2" Ø PVC AND RIGID STEEL, (3) #4/0 CU THWN (1) #4 CU THWN W/ 2 1/2" Ø PVC AND RIGID STEEL. ALL CONDUIT BELOW PANEL ABOVE GRADE SHALL BE SCHEDULE 80 RIGID METAL CONDUIT.
- ROUTE #2/0 BARE CU GROUND FROM NEUTRAL BAR TO (3) 0.625"x8" CU CLAD GROUND RODS. EQUALLY SPACE THREE GROUND RODS AND PROVIDE #2/0 GROUND RING.
- DESIGNED IN ACCORDANCE WITH THE LATEST VERSION OF NEC.



NOTE:  
48" MAX. TO 15" MIN. TO OPERABLE PART FOR ADA SITES.



CIVIL ENGINEER: BRENT CORWIN  
LICENSE NO. PE-2006002804



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ISSUE DATE: \_\_\_\_\_

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: AWW  
CHECKED BY: MCK  
DESIGNED BY: ABC

SHEET TITLE:  
**ELECTRICAL  
DETAILS**

SHEET NUMBER:

**E-201**

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