



CITY OF NORMAN, OK NORMAN FORWARD SAXON PARK AD HOC ADVISORY GROUP-

Municipal Building, Executive Conference Room, 201 West Gray, Norman,
OK 73069

Friday, December 13, 2024 at 3:30 PM

AGENDA

It is the policy of the City of Norman that no person or groups of persons shall on the grounds of race, color, religion, ancestry, national origin, age, place of birth, sex, sexual orientation, gender identity or expression, familial status, marital status, including marriage to a person of the same sex, disability, relation, or genetic information, be excluded from participation in, be denied the benefits of, or otherwise subjected to discrimination in employment activities or in all programs, services, or activities administered by the City, its recipients, sub-recipients, and contractors. In the event of any comments, complaints, modifications, accommodations, alternative formats, and auxiliary aids and services regarding accessibility or inclusion, please call 405-366-5424, Relay Service: 711. To better serve you, five (5) business days' advance notice is preferred.

ROLL CALL

MINUTES

1. CONSIDERATION OF APPROVAL, REJECTION, AMENDED AND/OR POSTPONEMENT OF MINUTES FROM THE JUNE 14, 2024 NORMAN FORWARD SAXON PARK AD HOC ADVISORY GROUP MEETING

DISCUSSION ITEMS

2. REVIEW PROPOSED SAXON PARK 90% DOCUMENTS
3. BUDGET AND PROJECT UPDATE

MISCELLANEOUS COMMENTS

ADJOURNMENT

Norman Forward
Saxon Park
Ad Hoc Advisory Group
June 14, 2024

Item 1.

The Norman Forward Saxon Park Ad Hoc Advisory Group of the City of Norman, Cleveland County, State of Oklahoma, met in the Executive Conference Room of the Norman Municipal Building, on the 14th day of June, 2024 at 9:07 a.m. and notice of the agenda of the meeting were posted at 201 West Gray Street and on the City website at least 48 hours prior to the beginning of the meeting.

ROLL CALL

Present: Chair McManaman and Members Evans and Schemm and Ex-Officios Rogers, Sallee and Usry

Absent: Member Carson and Queton

City Officials

Present: Jason Olsen, Director of Parks and Recreation
Bethany Grissom, Park Planner
Karla Sitton, Administrative Technician IV

ITEM 1, being:

CONSIDERATION OF APPROVAL, REJECTION, AMENDED AND/OR POSTPONEMENT OF
MINUTES FROM THE MAY 17, 2024 NORMAN FORWARD SAXON PARK AD HOC MEETING

Member Evans made the motion, and Member Schemm seconded to approve the June 14, 2024 meeting minutes. The vote was taken with the following results:

YEAH: Chair McManaman and Members Evans and Schemm

NAY: None

ITEM 2, being:

PROJECT AND BUDGET UPDATE

Mr. Robert Richardson, Wallace Design Collective (WDC), said the proposed Norman Forward (NF) Saxon Park Project was \$170,000 over budget and the Ad Hoc Group requested that he review the proposed design to find cost saving options. He highlighted options to reduce cost; reducing the restroom / shelter building size, bidding the artificial turf around the playground as an "add alternate", and decreasing the area of site clearing, earthwork, and rough grading by reducing the project limits. Staff said changing the restroom to four family areas would further reduce the costs, i.e., family restroom areas do not need individual stalls, which are more expensive and require more maintenance. Mr. Jason Olsen, Director of Parks and Recreation, also felt a new proposed "Tree Fund" could be utilized to purchase some of the trees for the proposed landscaping, adding further savings to the project.

Member Schemm said the proposed design shows the only water fountain is to be placed near the shelter area and Mr. Richardson said yes; however, he can look at moving it, but it seemed like the best spot since it was under shade and not on the west side (of the building). Ex-Officio Usry felt people would need additional water access in the event the pavilion was rented out and also asked whether any fire hydrants would be installed in the park. Mr. Richardson said he understands the drinking water concerns; however, most park visitors typically bring their own water/water bottles and they would still be able to access the water fountain in the pavilion without disturbing other users (should the pavilion be rented/reserved).

Member Schemm said Ruby Grant Park has pet drinking stations and Staff said yes, but they are very expensive. Mr. Olsen said additional water fountains/pet drinking stations can be included as add/alternates and Chair McManaman said he liked that option. Member Schemm asked whether the artificial turf would allow runoff to drain into the ground and Mr. Richardson said yes, the playground surfacing will be poured-in-place rubber and the bid will include drains to be placed underneath it. He said additionally, the sidewalks (near the playground) also have drains underneath for runoff. Chair McManaman encouraged the Ad Hoc Group to increase the playground budget and Mr. Olsen said there might be additional funding options to include the Park Development Fund and/or the ADA Fund. He said Staff will put together a total playground package, companies will submit designs according to the budget, and Staff will bring back three playground options for the Ad Hoc Group's approval.

Mr. Richardson said, per the Ad Hoc Group's request, two additional handicapped spaces were added and Ex-Officio Rogers asked whether they could be moved closer to the restroom building. Mr. Richardson said if the Ad Hoc Group preferred, they could be moved to the "middle" of the parking row, but that would not put them any closer than they currently are to the restroom entrance.

Mr. Richardson highlighted the cost estimate and said the greatest saving(s) was reducing the restroom/shelter building. Member Schemm said the cost would be higher, but he advocates for wider sidewalks. Chair McManaman said bikes are not allowed on the sidewalk/trail; therefore, he felt wider sidewalks are not necessarily needed. Ex-Officio Rogers asked whether bike racks will be installed at the park and Mr. Olsen said yes, Staff usually has them in stock and/or can partner with the Norman Arts Council to place a bike rack as an art piece, similar to what has been done along Main Street.

The Ad Hoc Group discussed and agreed that the restroom/shelter building size should be reduced and that bathrooms should be changed to family bathrooms.

The Ad Hoc accepted the budget and design presented, and WDC will move forward with notice of construction drawings.

MISCELLANEOUS COMMENTS

None

ADJOURNMENT

Chair McManaman adjourned the meeting at 1:38 p.m.

Passed and approved this _____ of _____, 2024.

Tyler McManaman, Chairperson

INDEX TO DRAWINGS

NO.	SHEET TITLE
CIVIL DRAWINGS	
C1.00	SITE KEY PLAN
C2.01	SOUTH SITE PREPARATION
C3.01	SOUTH MATERIALS ENLARGEMENT PLAN
C3.02	NORTH MATERIALS ENLARGEMENT PLAN
C4.01	SOUTH GRADING PLAN
C4.02	NORTH GRADING PLAN
C4.03	POND PLAN
C5.01	SOUTH UTILITY PLAN
C6.01	SITE PREPARATION DETAILS
C6.02	SITE DRAINAGE DETAILS
C6.03	PARKING LOT DETAILS
LANDSCAPE DRAWINGS	
L1.00	LANDSCAPE NOTES
L1.01	PLAYGROUND & SITE FURNITURE PLAN
L2.01	CONSTRUCTION DETAILS
L2.02	CONSTRUCTION DETAILS
L2.03	NORTH TRAIL DETAILS
L3.01	IRRIGATION PLAN
L3.02	IRRIGATION DETAILS
L4.01	SITE LIGHTING PLAN
L4.02	LIGHT POLE DETAILS
GRAPHIC DESIGN DRAWINGS	
G1.00	SIGNAGE DESIGN GENERAL REQUIREMENTS
G1.01	GRAPHIC DESIGN KEY PLAN
G1.02	GRAPHIC DESIGN SIGN DETAILS
G1.03	GRAPHIC DESIGN SIGN DETAILS
G1.04	GRAPHIC DESIGN SIGN DETAILS
ARCHITECTURAL DRAWINGS	
A0.1	PICNIC SHELTER ACCESSIBILITY
A2.0	PICNIC SHELTER FLOOR PLAN
A2.1	PICNIC SHELTER FOUNDATION PLAN
A2.2	PICNIC SHELTER FOUNDATION DETAILS
A3.0	PICNIC SHELTER ROOF PLAN & RCP
A3.1	PICNIC SHELTER FRAMING PLAN
A4.0	PICNIC SHELTER EXTERIOR ELEVATIONS
A4.1	PICNIC SHELTER BUILDING SECTIONS
A4.2	PICNIC SHELTER SECTION DETAILS
A5.0	PICNIC SHELTER INTERIOR ELEVATIONS
SP.1	SPECIFICATIONS
SP.2	SPECIFICATIONS
E1.0	ELECTRICAL LIGHTING AND POWER PLANS
E2.0	ELECTRICAL PANELS AND ONE LINE DIAGRAM
M1.0	HVAC PLAN AND SCHEDULES
P1.0	SANITARY SEWER PLAN AND ISOMETRIC
P2.0	DOMESTIC WATER PLAN
P3.0	PLUMBING DETAILS
P4.0	PLUMBING SPECIFICATIONS

CITY OF NORMAN
PARKS & RECREATION DEPARTMENT
JOHN H. SAXON, JR. PARK
3016 36th AVENUE SE
NORMAN, OKLAHOMA 73026

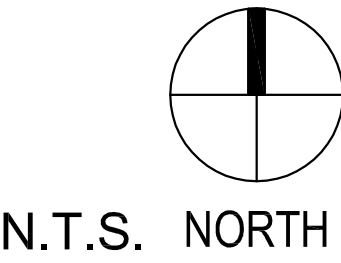


GENERAL NOTES

ALL CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH CURRENT CITY OF NORMAN CODES AND ORDINANCES, ENGINEERING DESIGN CRITERIA, AND NORMAN PARKS STANDARDS AND SPECIFICATIONS.

CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ALL STRUCTURES, LANDSCAPING, PAVING, AND ANY OTHER ITEMS LOCATED WITHIN AND OUTSIDE THE WORK AREA. ANY DAMAGE TO PERMANENT ITEMS INCURRED BY THE CONTRACTOR'S WORK IN THIS CONTRACT SHALL BE REPAIRED TO IT'S ORIGINAL

CONDITION, AT THE CONTRACTOR'S EXPENSE. ALL CONSTRUCTION MATERIALS SHALL BE IN ACCORDANCE WITH NORMAN PARKS DEPARTMENT SPECIFICATIONS, INCLUDING O.D.O.T. 2009 EDITION SPECIFICATIONS.



Landscape Architecture

Item 2.

wallace design collective

wallace design collective, pc
structural / civil / landscape / survey
123 north martin luther king jr. Blvd.
tulsa, oklahoma 74103
918.584.5858
oklahoma ca #CA03146
exp. date 06/30/25

Civil Engineers

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123 north martin luther king jr. Blvd.
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Architects

M

3600 West Main, Suite 200, Norman, OK 73072
405.360.1400 | [mparch.com](#)

Graphic Design

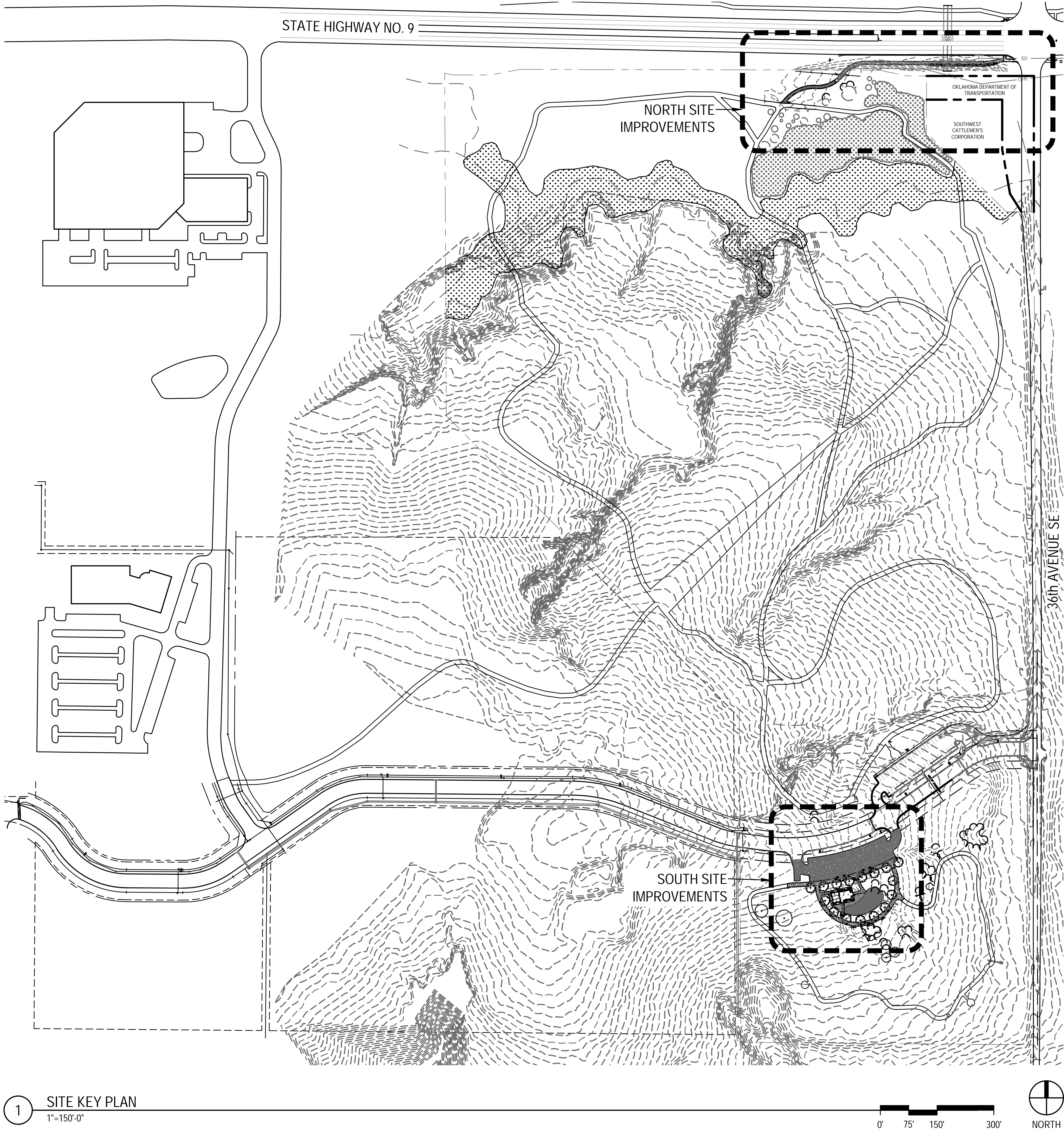
HW

Hoffer Waska creative

1443 S. Norfolk Ave
Tulsa, OK 74120
281.704.9729

City of Norman Parks & Recreation

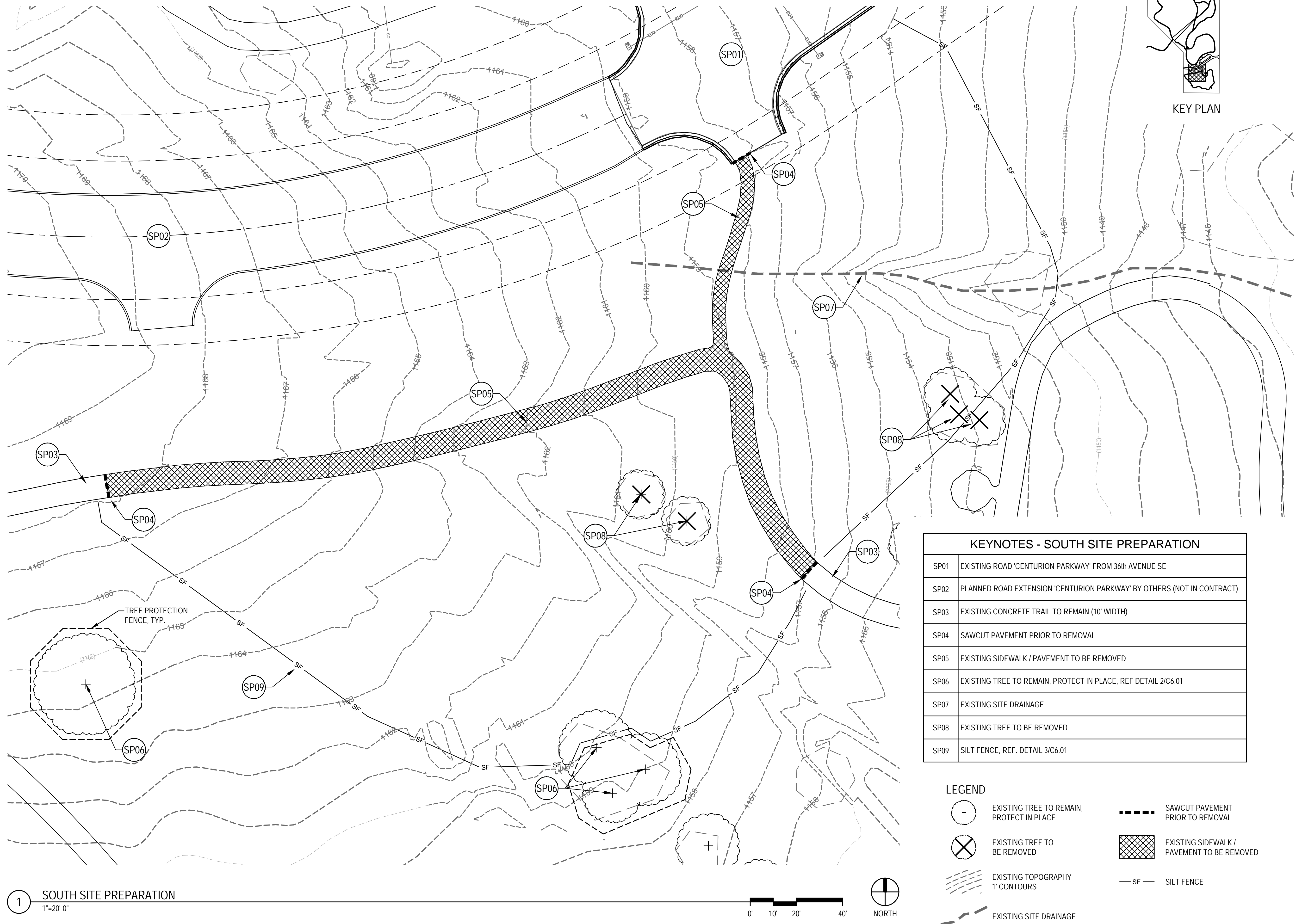
NORMAN PARKS & RECREATION

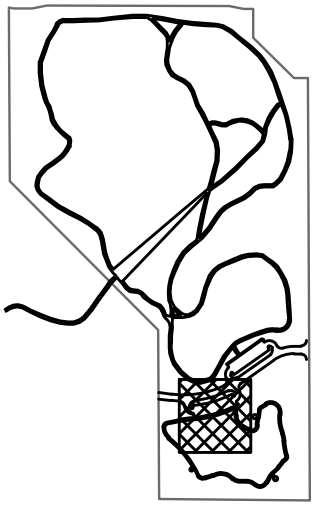
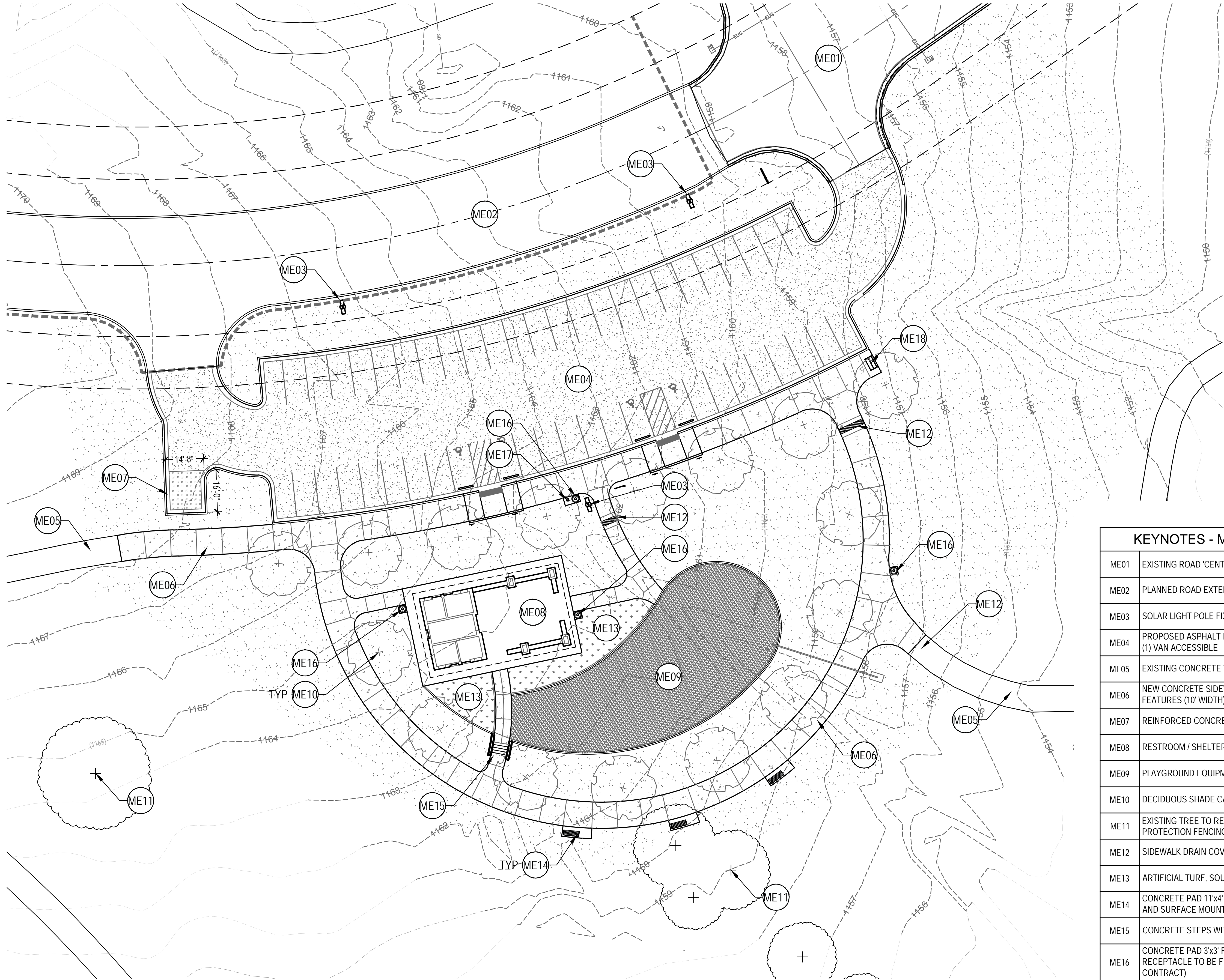


- LEGEND
- FLOODPLAIN / WATERWAY, REMOVE TREE DEADFALL AND UNDERGROWTH
 - EXISTING TOPOGRAPHY 1' CONTOURS
 - EXISTING SITE DRAINAGE
 - EXISTING TRAIL SYSTEM
 - PROPERTY BOUNDARY

1 SITE KEY PLAN
1"=150'-0"







KEY PLAN

LEGEND

- EXISTING TREE TO REMAIN, PROTECT IN PLACE
- CONCRETE SIDEWALK, REF. DETAIL 1/L2.01
- ASPHALT PARKING LOT PAVEMENT, REF. DETAIL 1/C6.03
- REINFORCED DUMPSTER PAD PAVEMENT (14'-8"W x 16'-0"L) REF. DETAIL 1/C6.03:
- SOLAR LIGHT POLE FIXTURE (ADD ALTERNATE), REF. DRAWINGS L4.01 & L4.02
- SOLID SOD COMMON BERMUDAGRASS

KEYNOTES - MATERIALS ENLARGEMENT PLAN

ME01	EXISTING ROAD 'CENTURION PARKWAY' FROM 36th AVENUE SE
ME02	PLANNED ROAD EXTENSION 'CENTURION PARKWAY', BY OTHERS (NOT IN CONTRACT)
ME03	SOLAR LIGHT POLE FIXTURES (ADD ALTERNATE), REF. DRAWINGS L4.01 & L4.02
ME04	PROPOSED ASPHALT PARKING LOT, FIFTY (50) SPACES; FOUR (4) HANDICAP WITH ONE (1) VAN ACCESSIBLE
ME05	EXISTING CONCRETE TRAIL (10' WIDTH)
ME06	NEW CONCRETE SIDEWALK ALONG PROPOSED PARKING LOT AND AROUND ALL NEW FEATURES (10' WIDTH), REF. DETAIL 1/L2.01
ME07	REINFORCED CONCRETE PAD (16'W x 12'D), REF. DETAILS 1/C6.03
ME08	RESTROOM / SHELTER BUILDING, REF. ARCHITECTURAL DRAWINGS
ME09	PLAYGROUND EQUIPMENT AND SURFACING (NOT IN CONTRACT), REF. DRAWING L1.01
ME10	DECIDUOUS SHADE CANOPY TREE (NOT IN CONTRACT)
ME11	EXISTING TREE TO REMAIN, PROTECT IN PLACE DURING CONSTRUCTION, SEE TREE PROTECTION FENCING DETAIL 2/C6.01
ME12	SIDEWALK DRAIN COVER (2' WIDTH), REF. DETAIL 4/L2.01
ME13	ARTIFICIAL TURF, SOUTH OF RESTROOM (NOT IN CONTRACT), REF. DRAWING L1.01
ME14	CONCRETE PAD 11'x4' FOR BENCH, REF. DETAIL 2/L2.01, BENCH TO BE FURNISHED AND SURFACE MOUNTED BY OTHERS (NOT IN CONTRACT)
ME15	CONCRETE STEPS WITH LOW WING WALLS, REF. DETAIL 2&3/L2.02
ME16	CONCRETE PAD 3'x3' FOR TRASH RECEPTACLE, REF. DETAIL 6/L2.01, TRASH RECEPTACLE TO BE FURNISHED AND SURFACE MOUNTED BY OTHERS (NOT IN CONTRACT)
ME17	CONCRETE PAD 3'x3' FOR DOG WASTE STATION, REF. DETAIL 7/L2.01, DOG WASTE STATION TO BE FURNISHED AND SURFACE MOUNTED BY OTHERS (NOT IN CONTRACT)
ME18	BIKE RACK TO BE FURNISHED AND SURFACE MOUNTED BY OTHERS (NOT IN CONTRACT)

1 SOUTH MATERIALS ENLAREMENT PLAN
1"=20'-0"



REVISIONS:

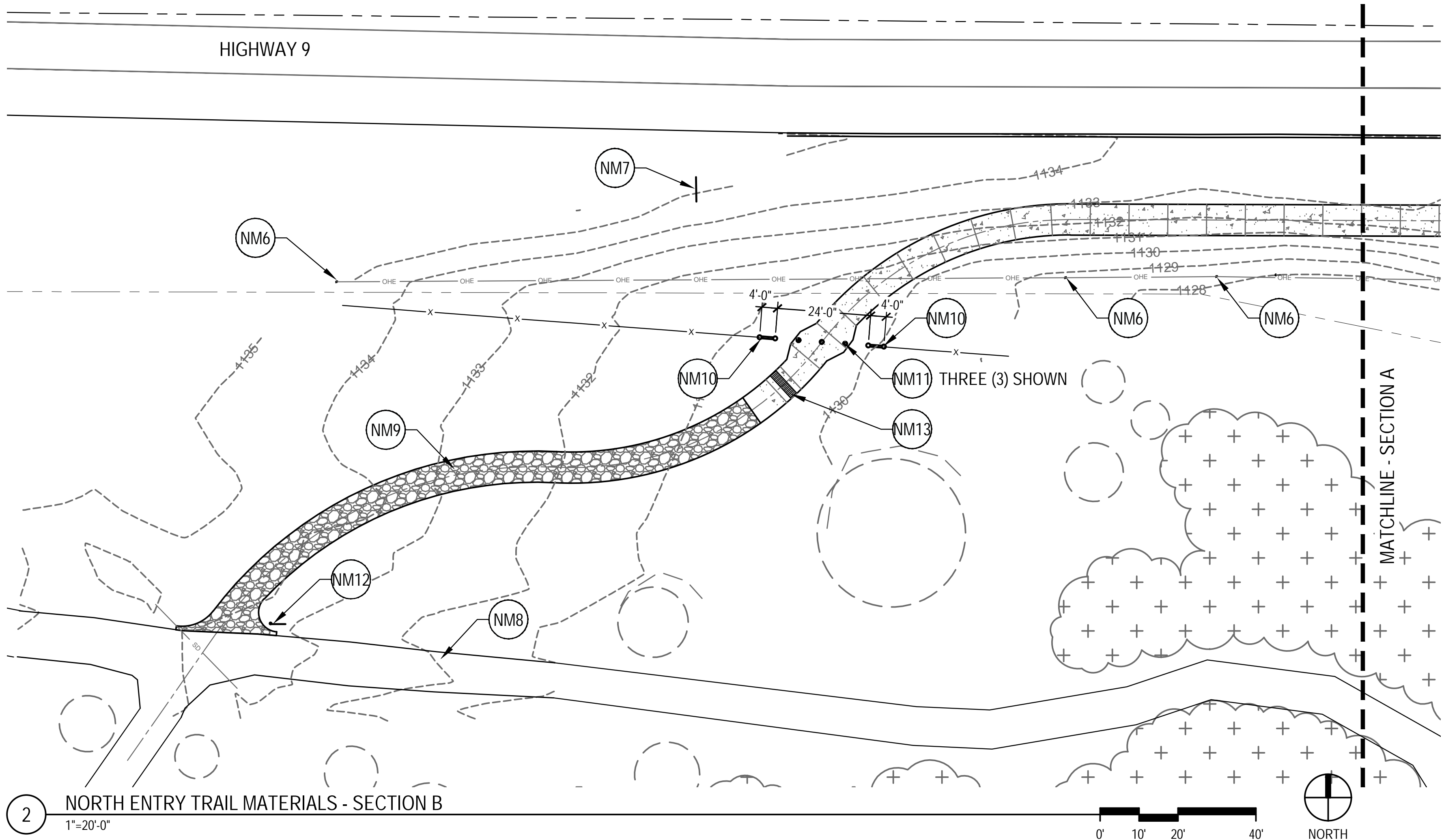
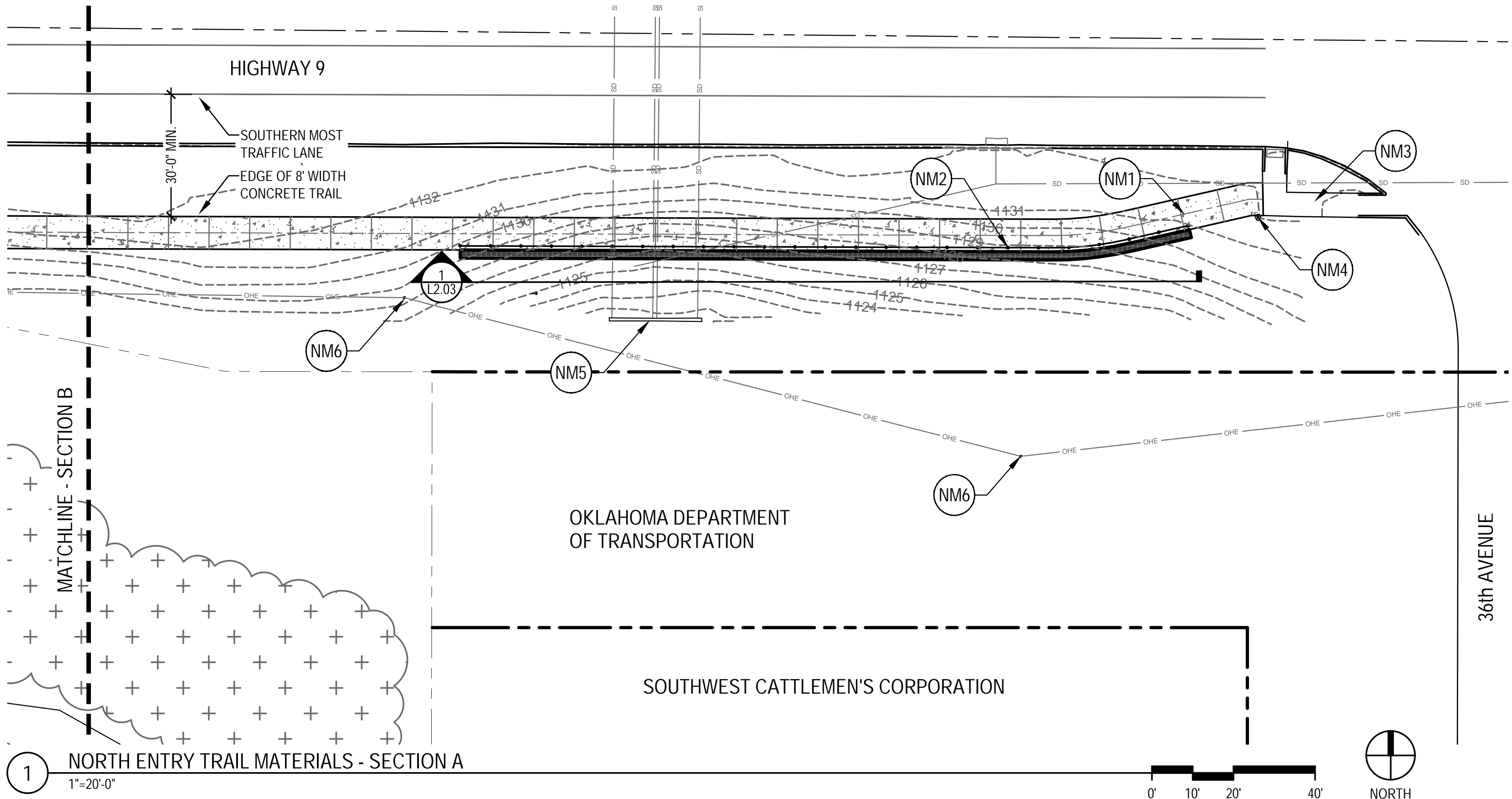
PROFESSIONAL SEAL:

ISSUE DATE:
December 9, 2024

90% CONSTRUCTION DOCUMENTS
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ENLARGEMENT PLAN
SHEET NUMBER:

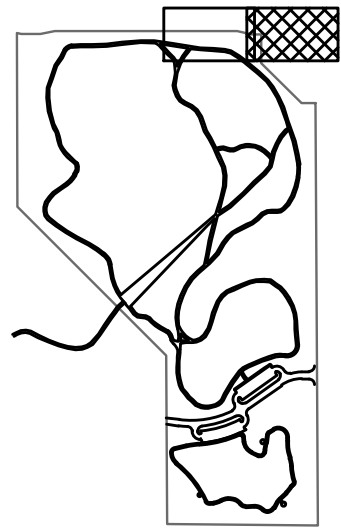
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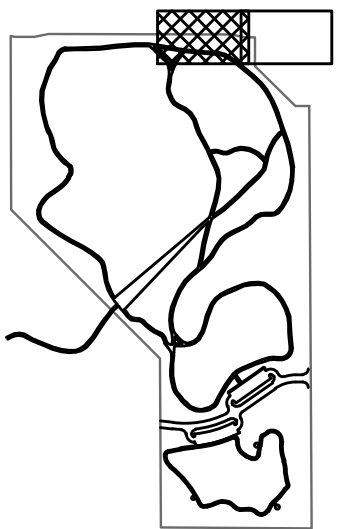


- LEGEND:
- EXISTING TOPOGRAPHY
1' CONTOURS
 - PROPOSED CONCRETE TRAIL,
8' WIDTH, REF. DETAIL 2/L2.03
 - DECOMPOSED GRANITE TRAIL,
8' WIDTH, REF. DETAIL 5/L2.01
 - EXISTING TRAIL SYSTEM
 - PROPERTY BOUNDARY

KEYNOTES - MATERIALS ENLARGEMENT PLAN	
NM1	PROPOSED CONCRETE TRAIL, 8' WIDTH x 465 LINEAR FEET, REF. DETAIL 2/L2.03
NM2	RETAINING WALL AND ORNAMENTAL METAL FENCE (180 LF) ALONG SOUTH SIDE OF CONCRETE TRAIL, REF. DETAILS L2.03
NM3	EXISTING SIDEWALK AND CURB RAMPS AT INTERSECTION OF HIGHWAY 9 & 36th AVENUE
NM4	EXISTING CROSSWALK SIGNAL
NM5	EXISTING HEADWALL AT DRAINAGE CULVERT
NM6	EXISTING POWER POLES FOR OVERHEAD ELECTRIC
NM7	EXISTING SIGN ALONG HIGHWAY 9
NM8	EXISTING DECOMPOSED GRANITE TRAIL SYSTEM
NM9	PROPOSED DECOMPOSED GRANITE TRAIL, 8' WIDTH x 160 LINEAR FEET, REF. DETAIL 5/L2.01, MATCH EXISTING TRAIL COLOR
NM10	CUT 24'-0" WIDTH OPENING IN EXISTING BARB-WIRE FENCE, TERMINATE BARB-WIRE FENCE WITH TWO (2) NEW STEEL H-BRACES. PRODUCT EQUAL TO HB2.8041, WEBSITE: www.farmranchstore.com/fencing-shop/h-braces . SUBMIT PRODUCT INFORMATION FOR REVIEW AND APPROVAL. BRACE POSTS TO BE ANCHORED IN 12" DIA. x 36" DEPTH CONCRETED FOOTINGS. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
NM11	PROVIDE THREE (3) 12" DIA. x 18" DEPTH SONOTUBE BLOCK-OUTS, SPACED 6'-0" ON CENTER, AT BARB-WIRE FENCE THRESHOLD. BOLLARDS BY OWNER
NM12	PARK MAP SIGNAGE, REF. DRAWING G101
NM13	SIDEWALK DRAIN COVER (2' WIDTH), REF. DETAIL 4/L2.01



KEY PLAN



KEY PLAN

Landscape Architecture

Item 2.

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structural civil landscape survey
123 north martin luther king jr. Blvd.
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City of Norman Parks & Recreation

John H. Saxon, Jr. Park

3016 36th Avenue SE

Norman, Oklahoma 73026

NORMAN
PARKS & RECREATION

REVISIONS:

PROFESSIONAL SEAL:

ISSUE DATE:
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90% CONSTRUCTION DOCUMENTS

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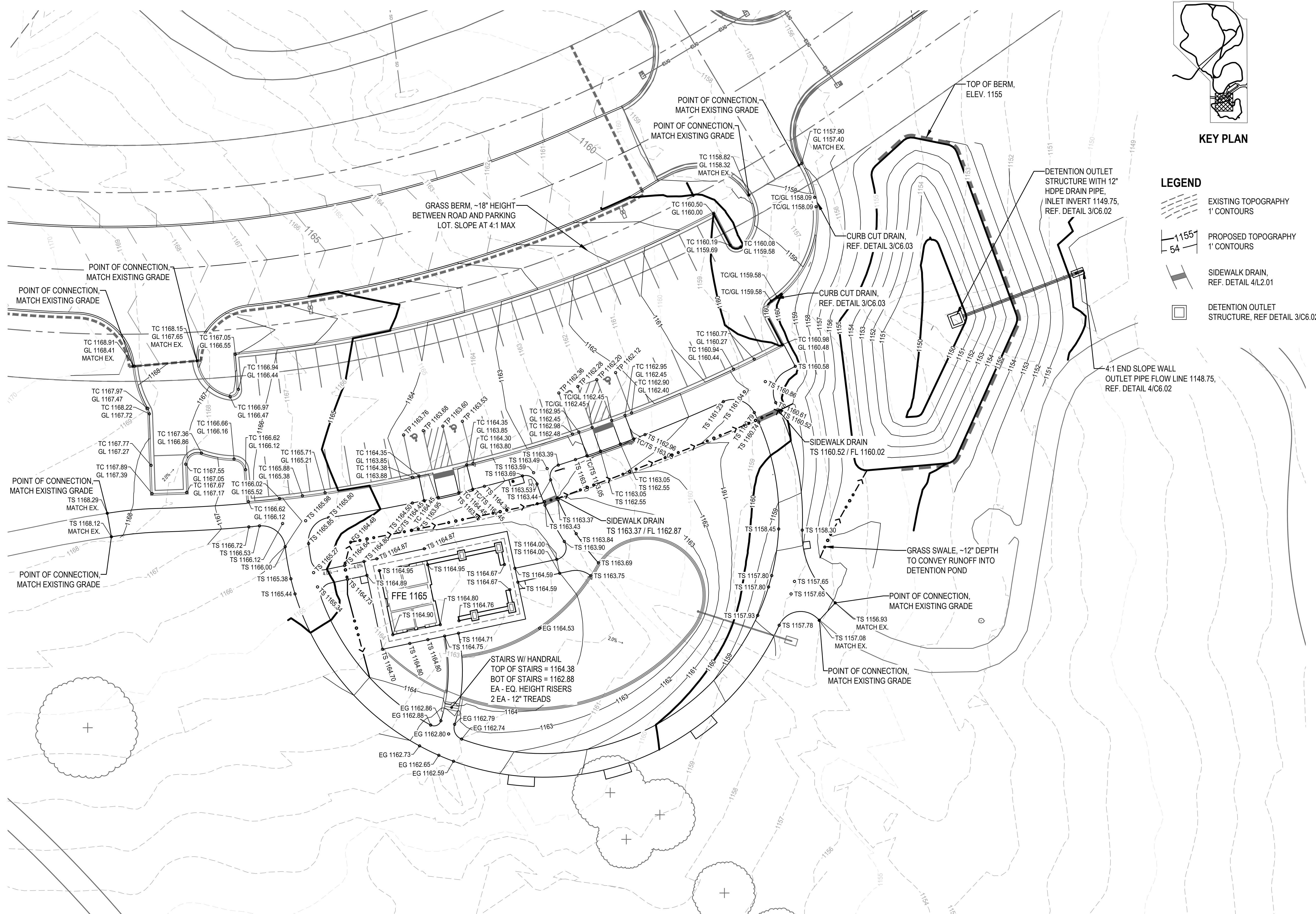
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ENLARGEMENT PLAN

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1 SOUTH GRADING PLAN
1"=20'-0"



KEY PLAN

LEGEND

- EXISTING TOPOGRAPHY
1' CONTOURS
- PROPOSED TOPOGRAPHY
1' CONTOURS
- SIDEWALK DRAIN,
REF. DETAIL 4/L2.01
- DETENTION OUTLET
STRUCTURE, REF DETAIL 3/C6.02

Landscaping

Item 2.

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123 north martin luther king jr. blvd.
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City of Norman Parks & Recreation

John H. Saxon, Jr. Park

3016 36th Avenue SE

Norman, Oklahoma 73026

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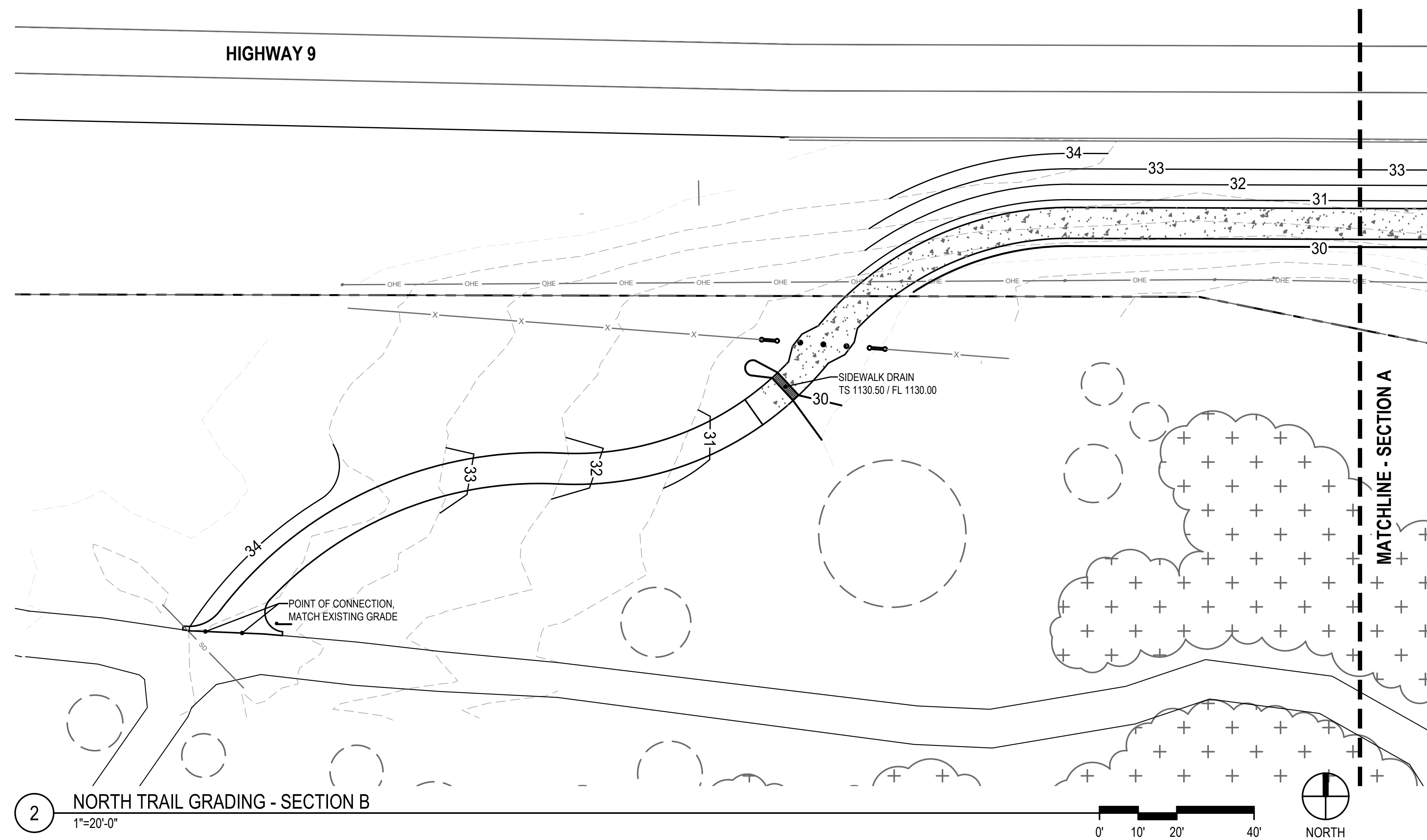
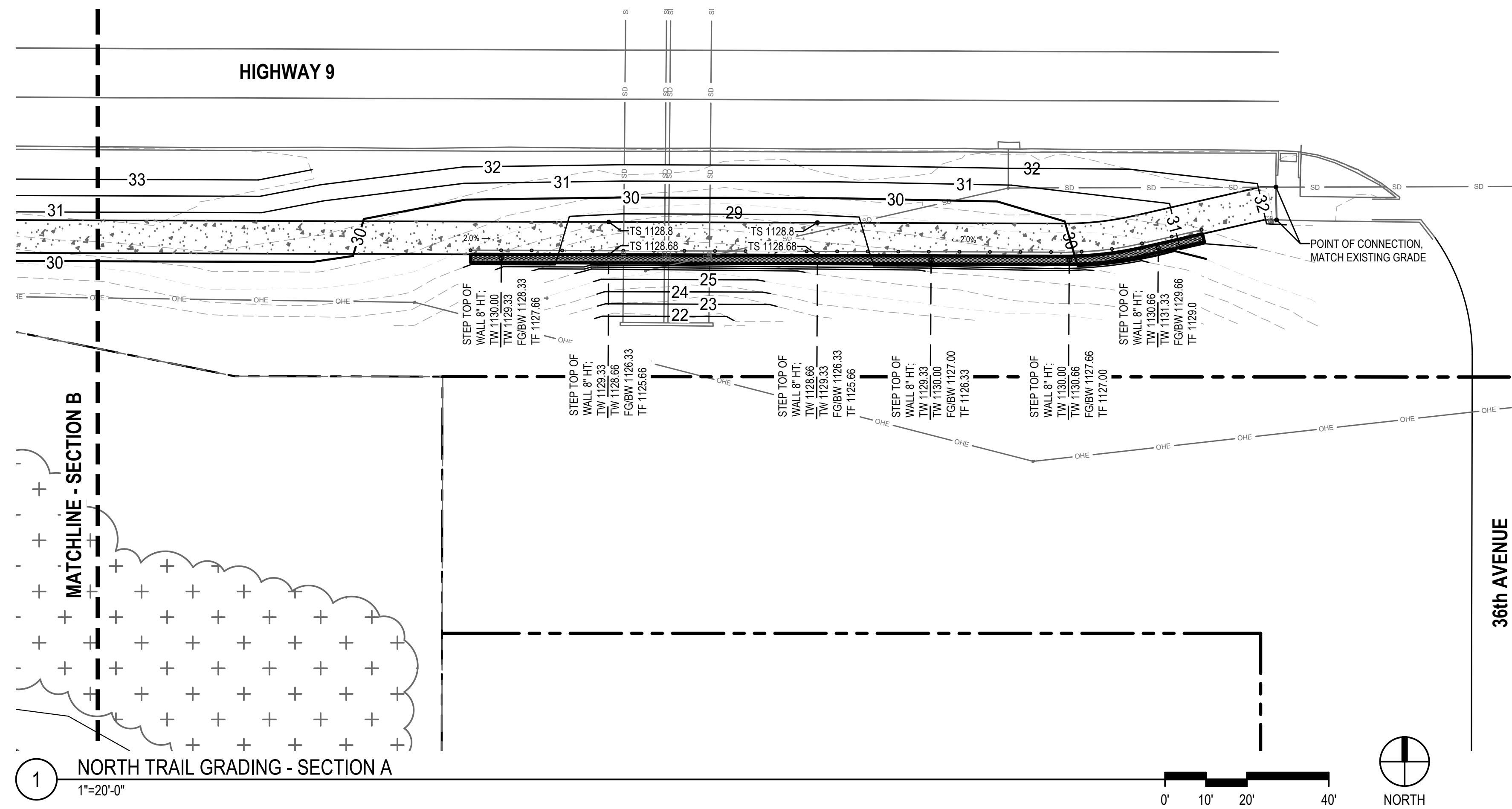
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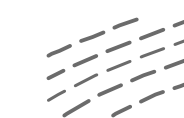
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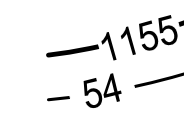
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LEGEND



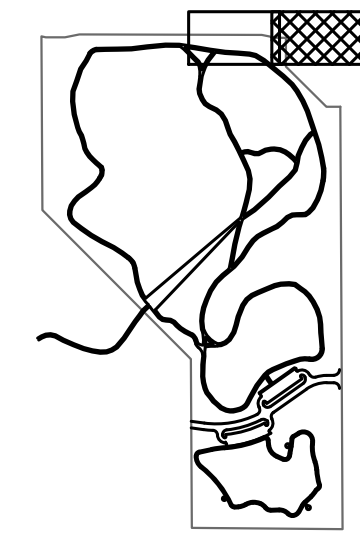
EXISTING TOPOGRAPHY
1' CONTOURS



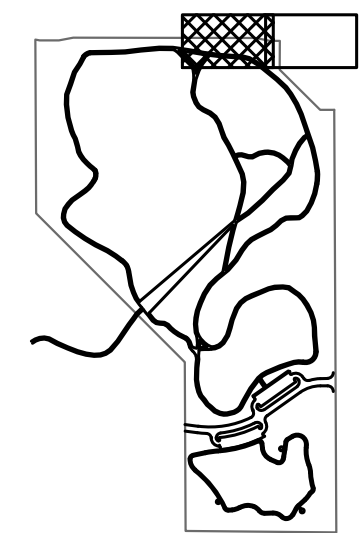
PROPOSED TOPOGRAPHY
1' CONTOURS



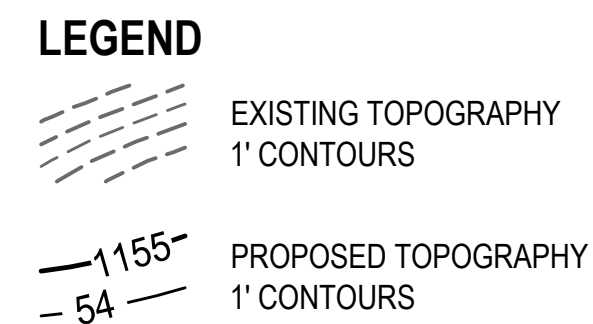
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KEY PLAN



KEY PLAN



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REVISIONS:

PROFESSIONAL SEAL:

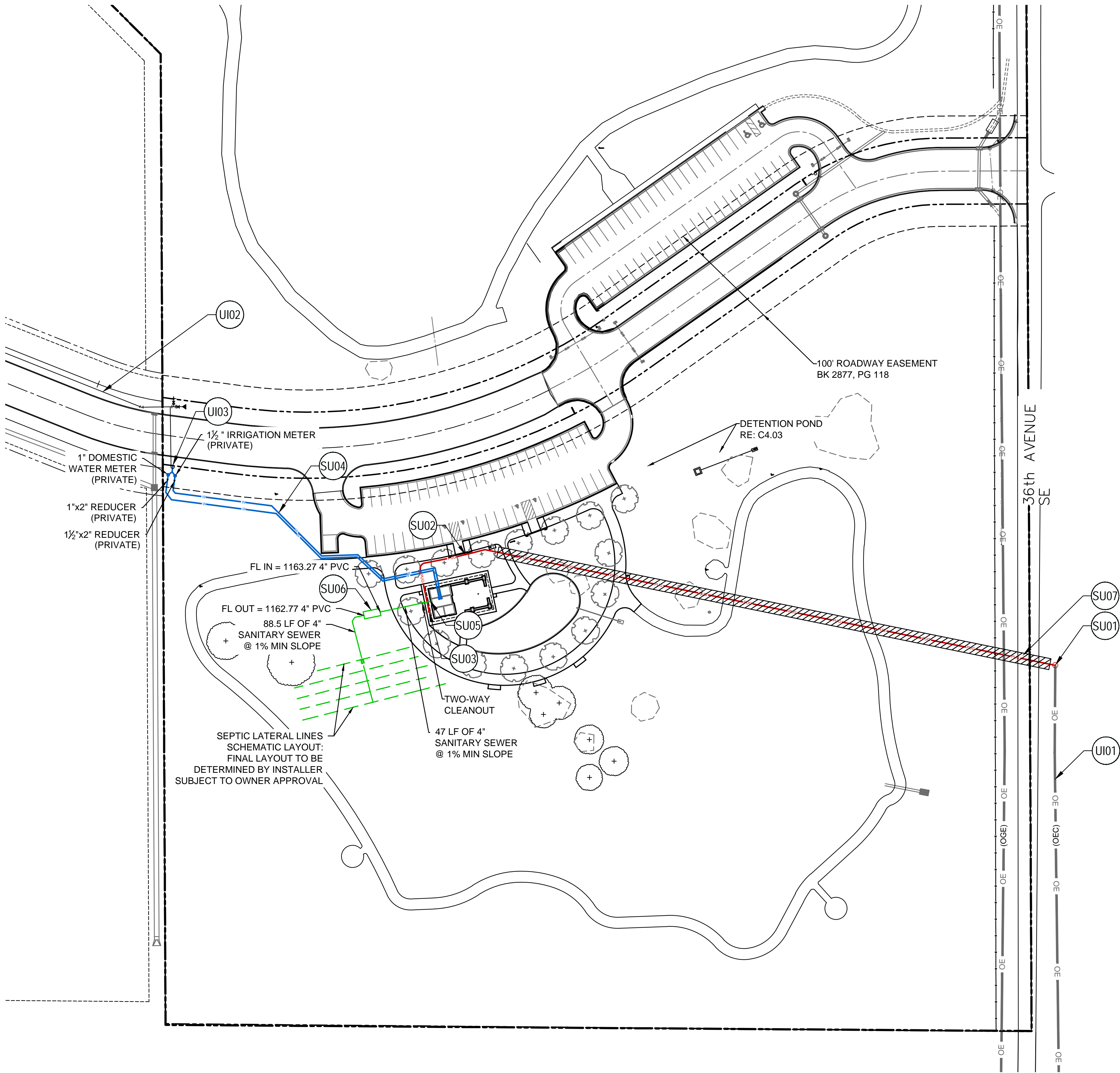
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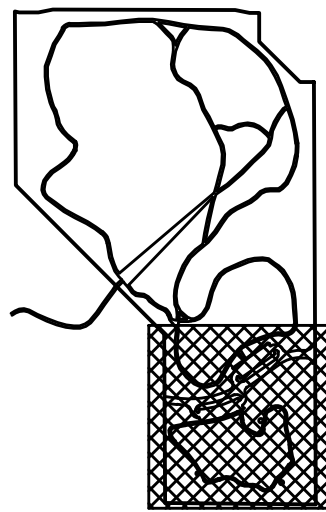
POND PLAN

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1 SOUTH UTILITY PLAN
1"=50'-0"



KEY PLAN

KEYNOTES - EXISTING UTILITY INFRASTRUCTURE

UI01	ELECTRICAL SERVICE ALONG EAST SIDE OF 36th AVENUE FROM EXISTING OKLAHOMA ELECTRIC COOPERATIVE (OEC) OVERHEAD ELECTRIC LINE
UI02	12" WATER LINE BY OTHERS WILL EXTEND FROM THE WEST ALONG NORTH SIDE OF ROAD EXTENSION
UI03	SINGLE LONG SERVICE (BY OTHERS) PROVIDES POINT OF CONNECTION FOR WATER ON SOUTH SIDE OF NEW ROADWAY

EXISTING LEGEND:

- EXISTING TOPOGRAPHY
1' CONTOURS
- PROPERTY BOUNDARY
- EXISTING OEC OVERHEAD ELECTRIC
- EXISTING WATER LINE

KEYNOTES - PROPOSED SOUTH UTILITY PLAN

SU01	POINT OF CONNECTION FOR ELECTRIC AT EXISTING OEC ELECTRIC POWER POLE ALONG 36TH AVENUE SE (COORDINATE W/ OEC & CITY OF NORMAN)
SU02	UNDERGROUND ELECTRIC SERVICE CONNECTION TO RESTROOM BUILDING, APPROXIMATELY 630 LINEAR FEET
SU03	ELECTRIC METER (WITH DISCONNECT SWITCH) ON EXTERIOR WALL OUTSIDE CHASE ROOM ON WEST SIDE OF RESTROOM BUILDING
SU04	2" WATER LINES TO RESTROOM FOR DOMESTIC WATER AND IRRIGATION, EACH APPROXIMATELY 300 LINEAR FEET
SU05	SANITARY SEWER EXIT AT BUILDING, FL = 1163.74 4" PVC
SU06	SANITARY SEWER SEPTIC TANK, TR = 1165.25
SU07	ELECTRIC SERVICE LINE PROPOSED BORE ROUTE UNDER 36TH AVENUE SE

PROPOSED LEGEND:

- UNDERGROUND ELECTRIC
- PROPOSED BORE ROUTE FOR ELECTRIC SERVICE
- 4" SANITARY SEWER LINE
- 2" WATER LINE(S) TO RESTROOM

REVISIONS:

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90% CONSTRUCTION DOCUMENTS

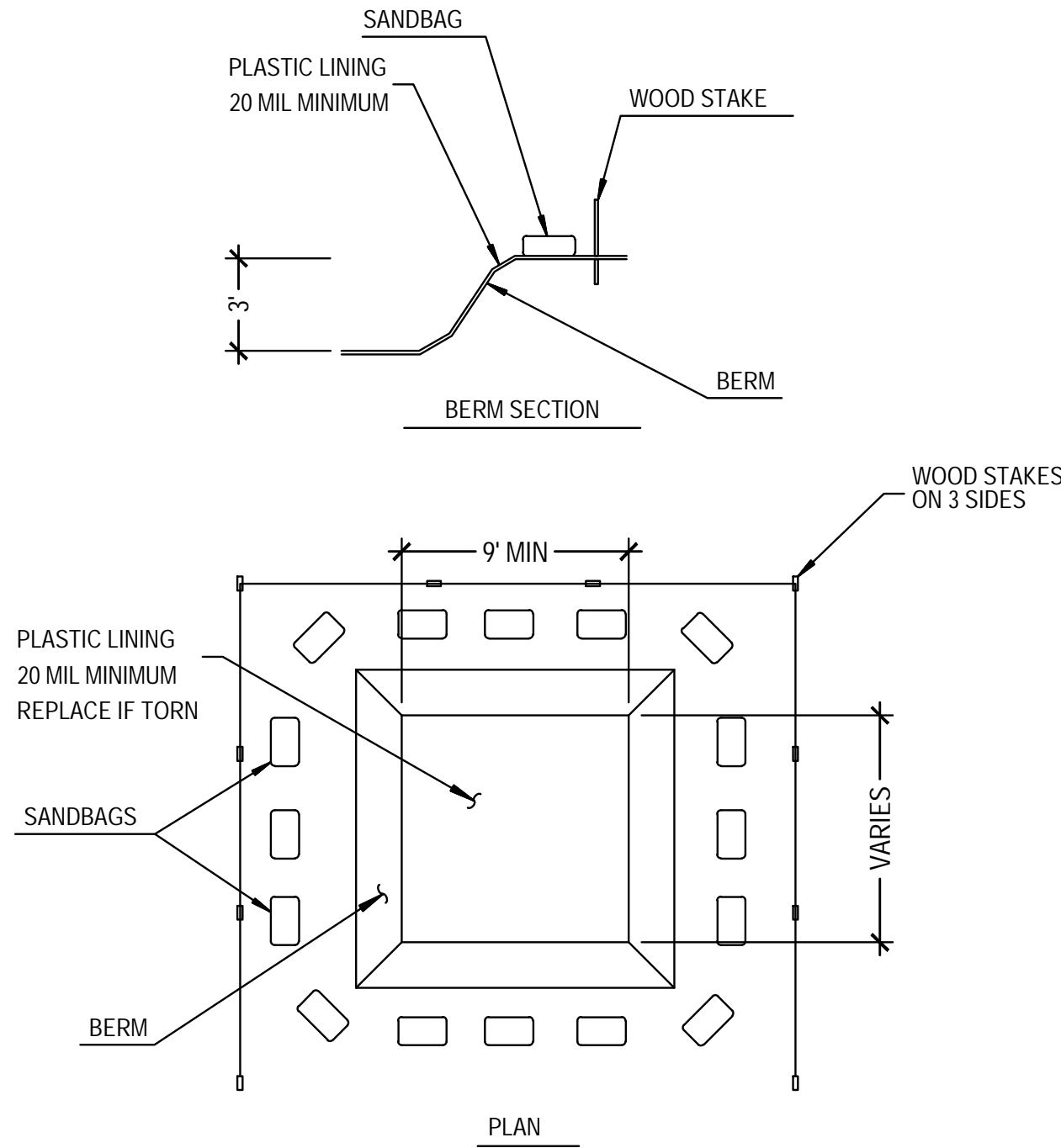
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SOUTH UTILITY
PLAN

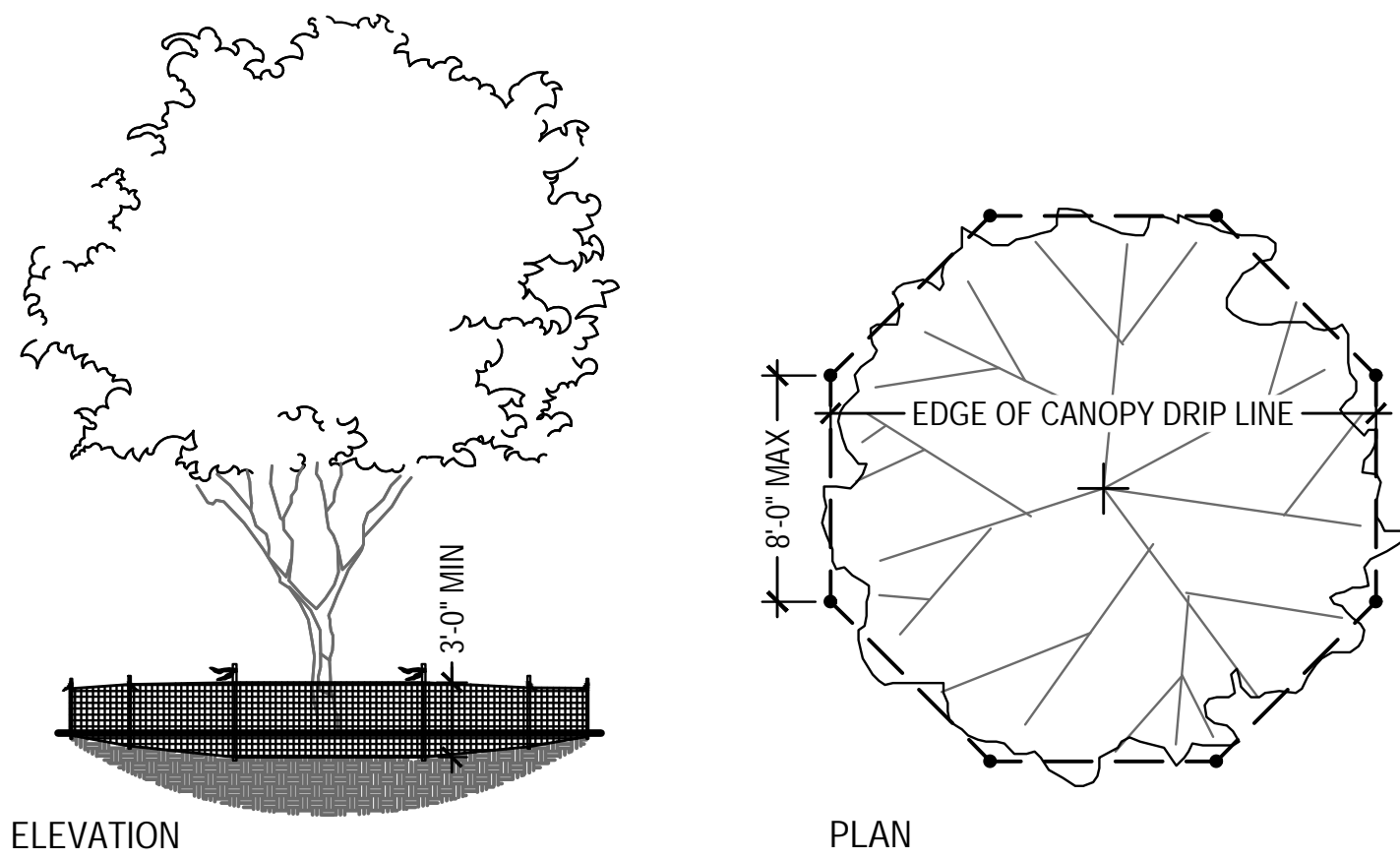
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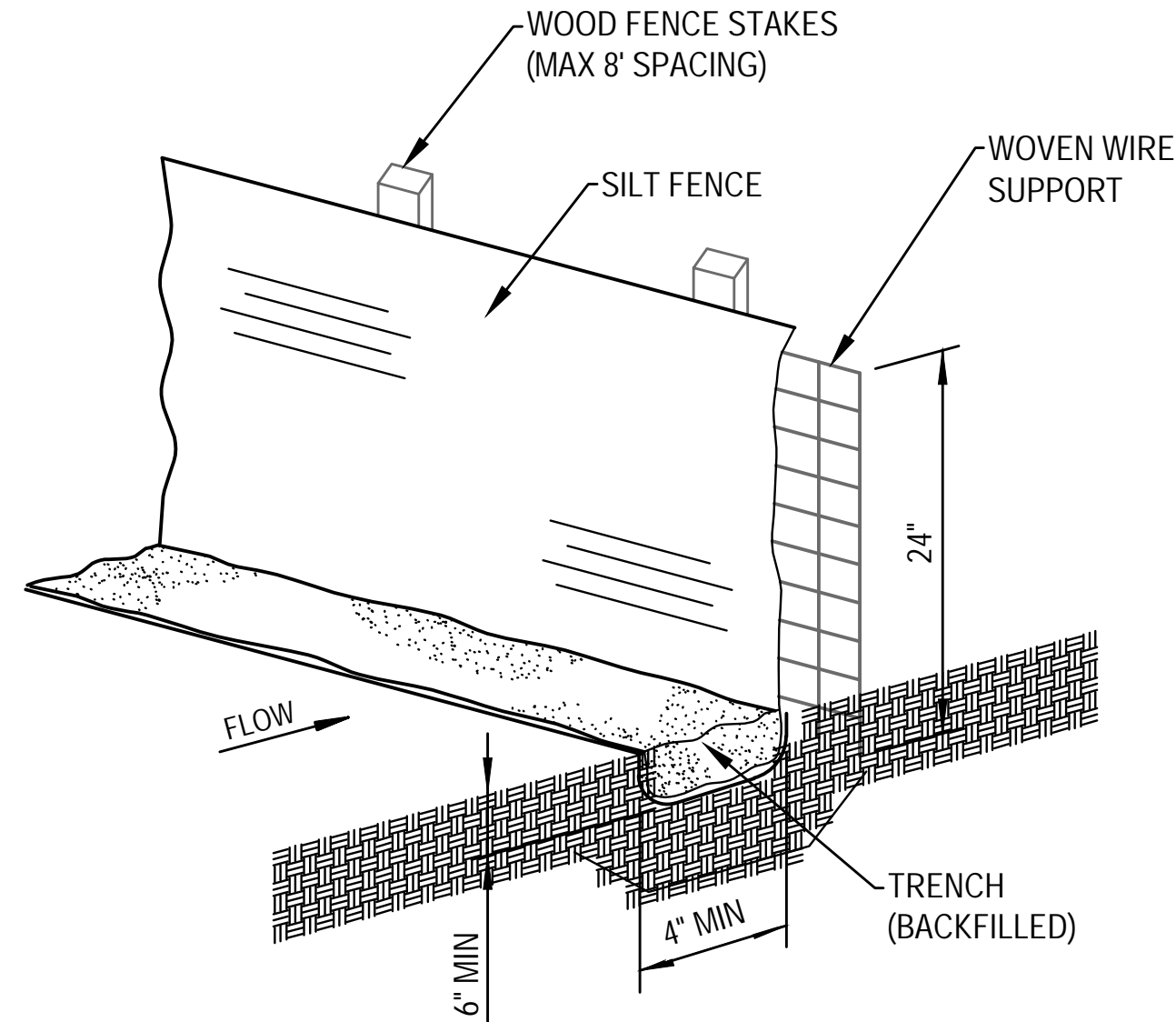


1 TEMPORARY CONCRETE WASHOUT PIT
NOT TO SCALE



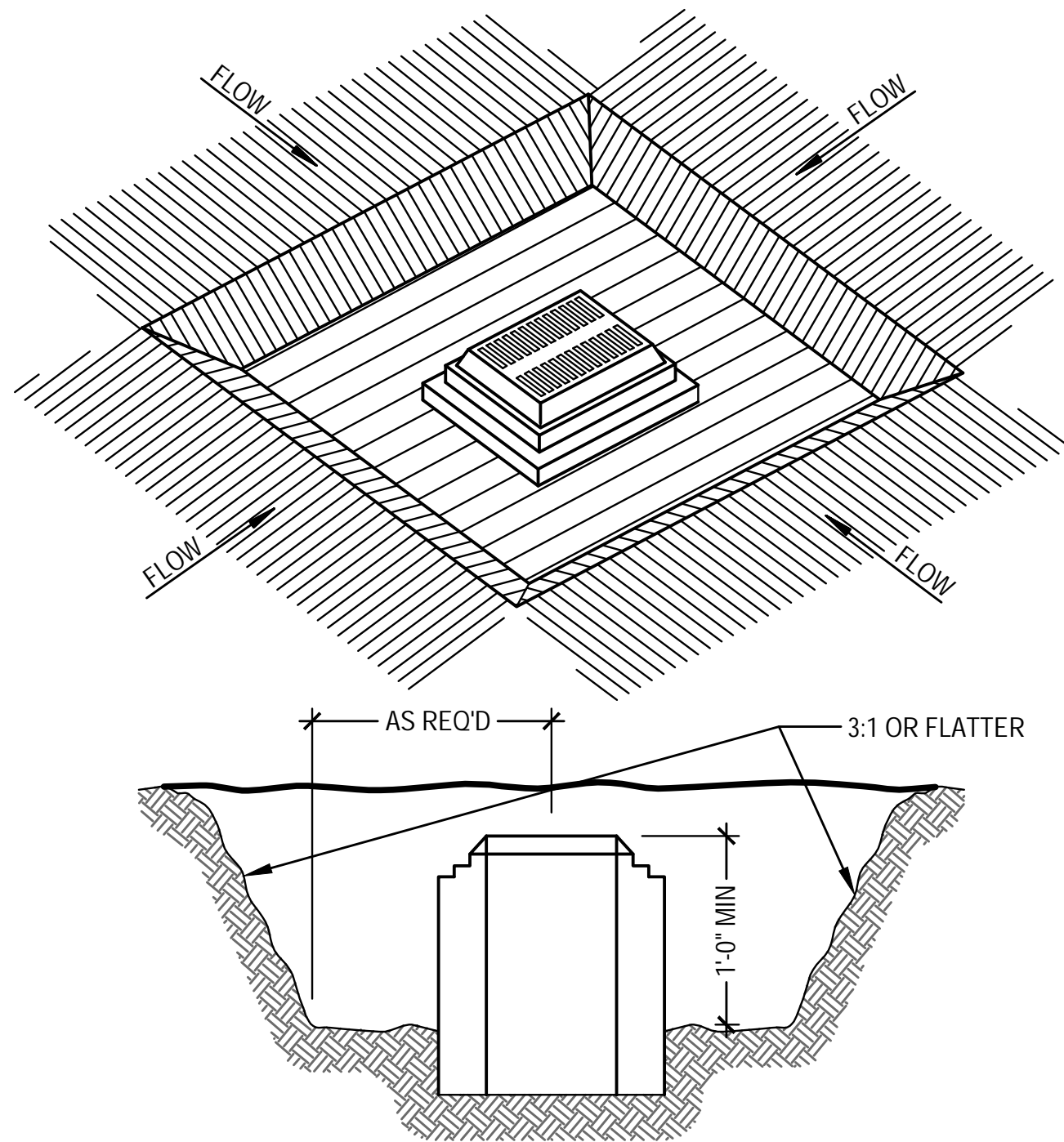
- NOTES
1. REFER TO LANDSCAPE PLANS FOR LOCATIONS AND EDGE CONDITIONS.
 2. TREE PROTECTION FENCING TO REMAIN IN PLACE DURING ALL CONSTRUCTION OPERATIONS AND BE MODIFIED IN THE FIELD AS LITTLE AS POSSIBLE FOR WORK WITHIN TREE PROTECTION ZONE.
 3. CONTRACTOR TO NOTIFY OWNER WHEN FENCE IS DOWN OR WORK IS TO BE DONE WITHIN TREE PROTECTION ZONE.
 4. TREE PROTECTION FENCING TO BE HIGH VISIBILITY MATERIAL SUCH AS ORANGE SAFETY FENCING OR RIGID MATERIAL SUCH AS CHAINLINK OR WIRE MESH FENCING.
 5. SAFETY FLAGGING TO BE INSTALLED AT THE TOP OF EACH FENCE POST.
 6. FENCE TO BE 3'-0" MINIMUM HEIGHT WITH POSTS SPACED NO MORE THAN 8'-0" O.C.

2 TEMPORARY TREE PROTECTION FENCING
NOT TO SCALE

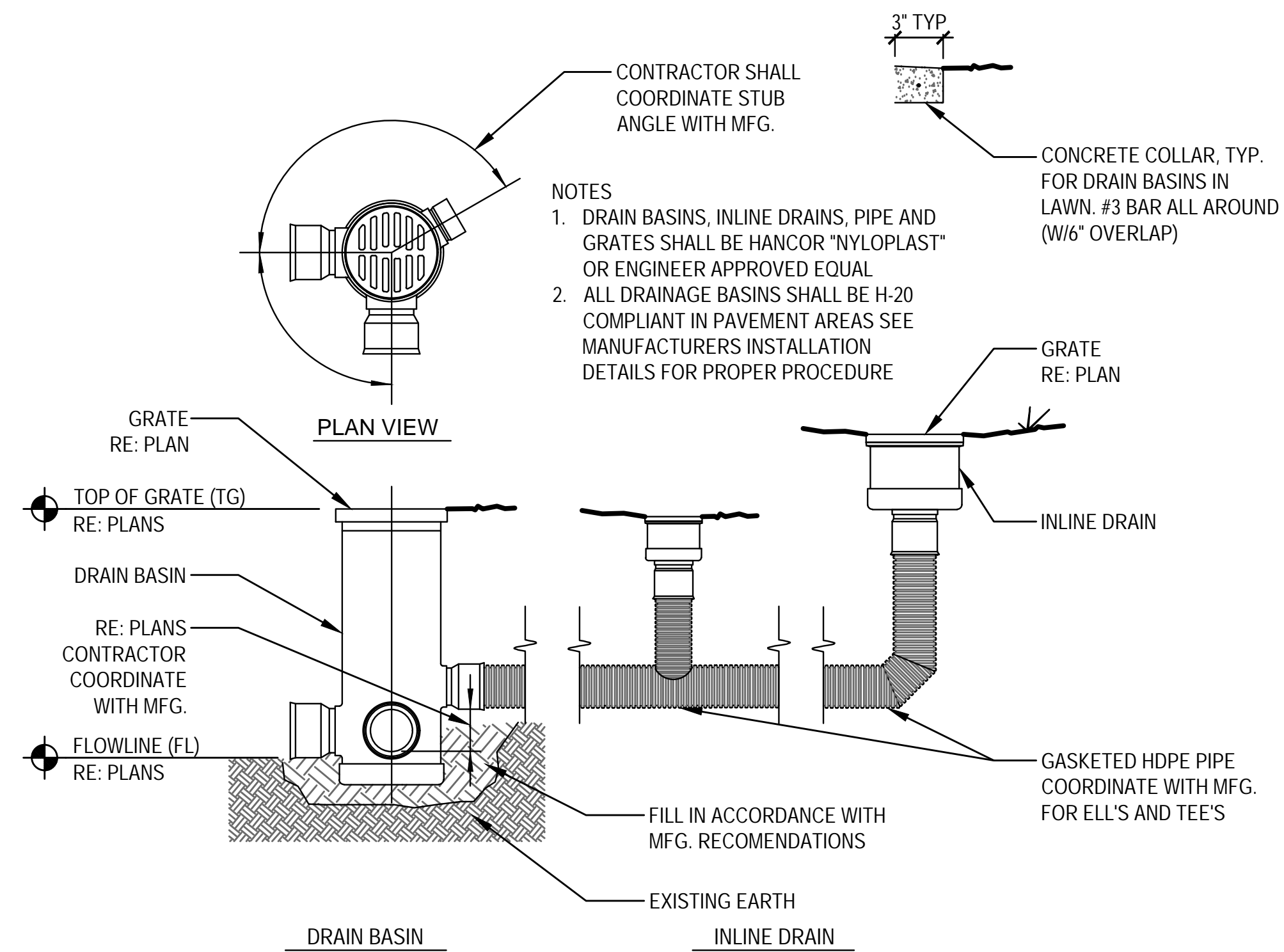


- NOTES
1. STAKES SHALL BE INSTALLED AT A SLIGHT ANGLE AGAINST THE FLOW
 2. SILT FENCE SHALL BE SECURELY FASTENED TO EACH STAKE OR THE WOVEN WIRE WHICH IS IN TURN ATTACHED TO THE FENCE STAKES

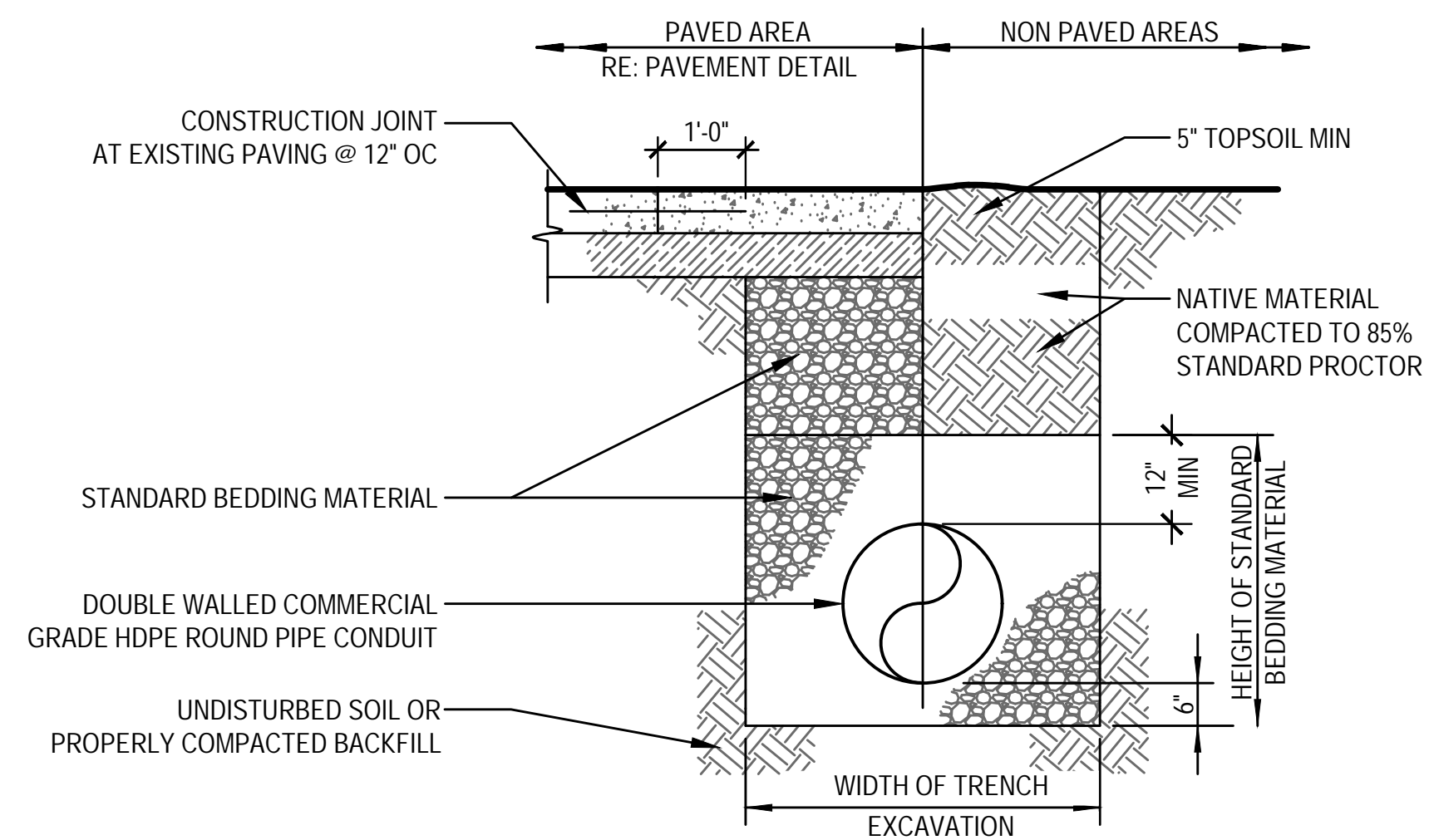
3 TEMPORARY SILT FENCE
NOT TO SCALE



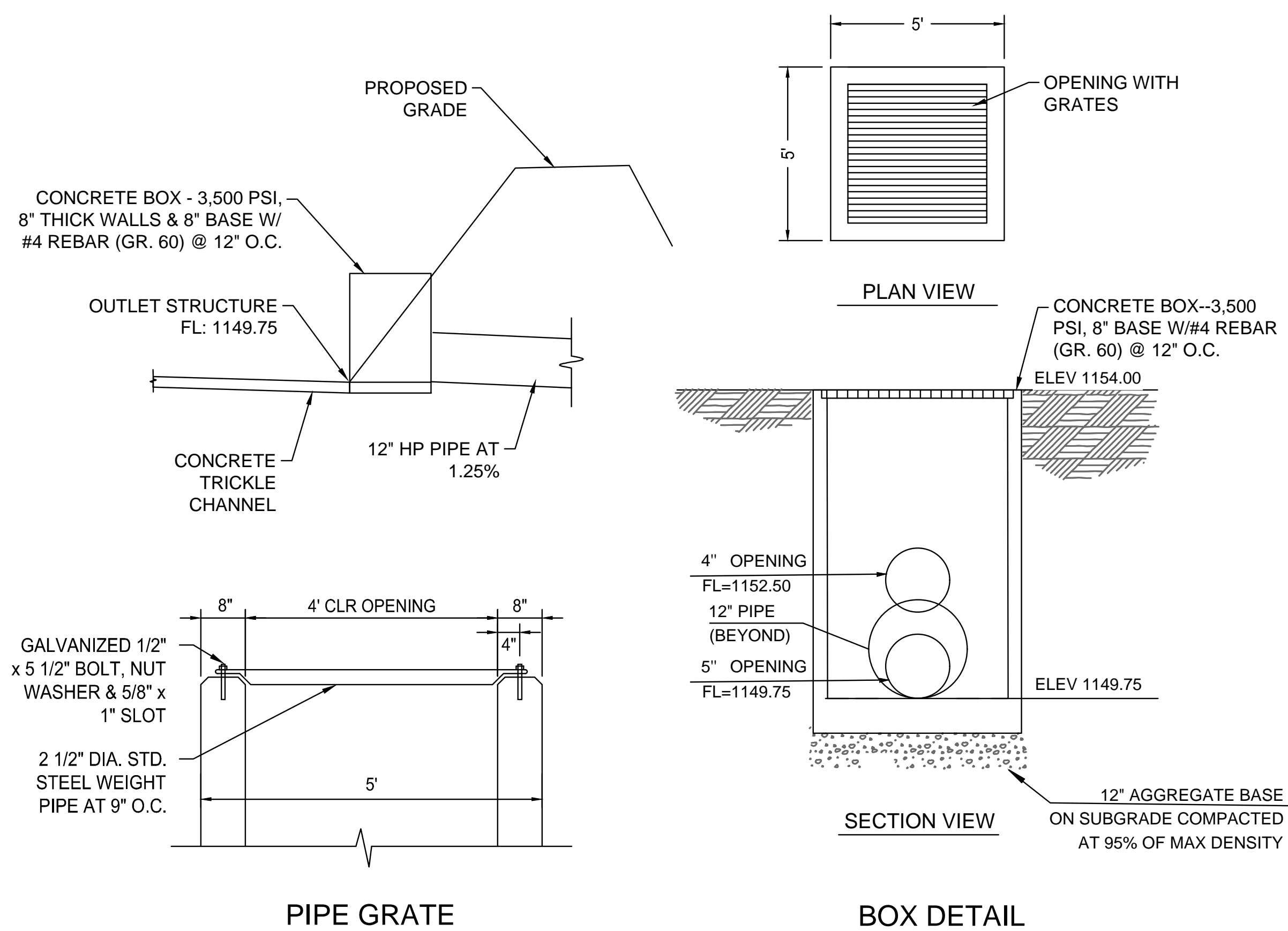
4 TEMPORARY INLET SEDIMENT TRAP
NOT TO SCALE



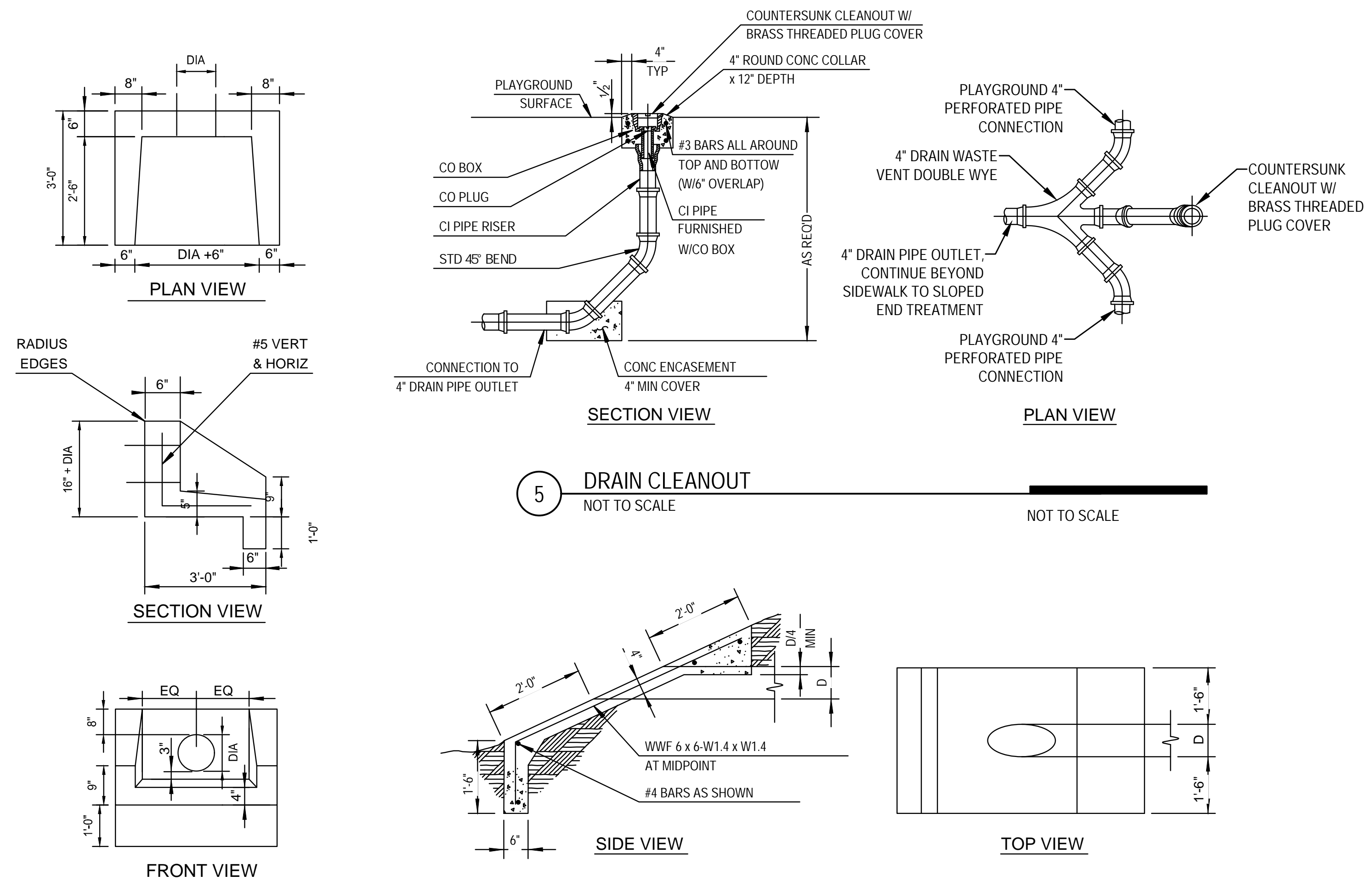
1 STORM DRAIN INLET
NOT TO SCALE



2 STANDARD PIPE BEDDING DETAIL FOR STORM SEWER
NOT TO SCALE



3 DETENTION OUTLET STRUCTURE

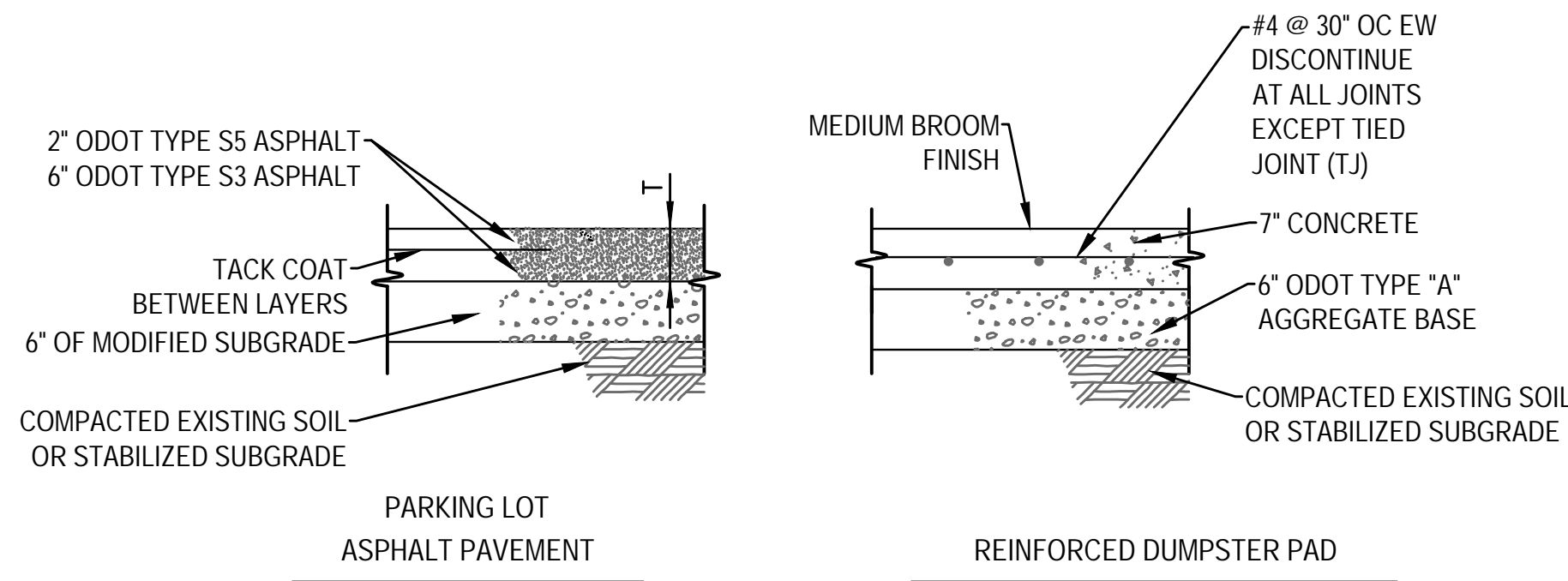


4 CONCRETE HEADWALL
NOT TO SCALE

6 CONCRETE SLOPED END TREATMENT
NOT TO SCALE

REFER TO PAVEMENT REQUIREMENTS AND PAVEMENT JOINT DETAILS FOR ADDITIONAL REQUIREMENTS

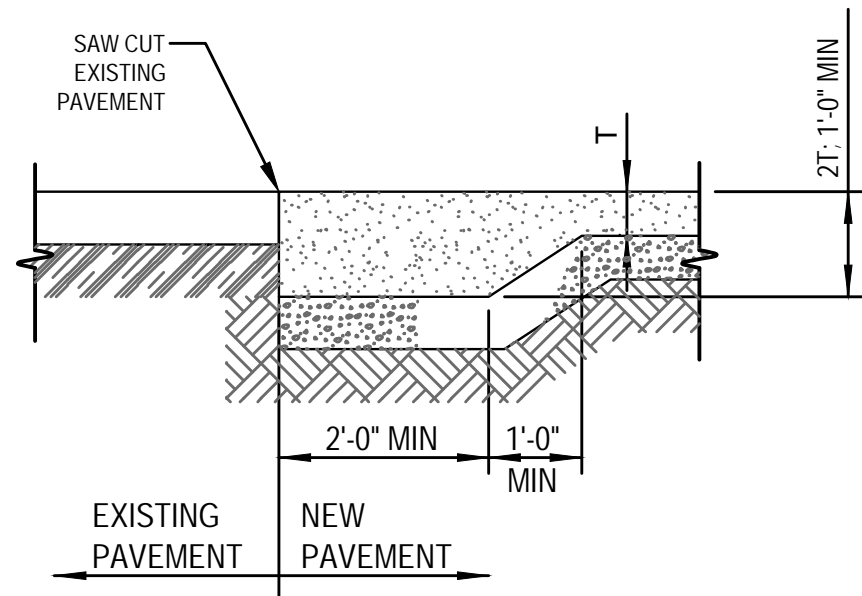
PLACE HOT-MIX ASPHALT BASE COURSE IN LIFTS OF 3" OR LESS



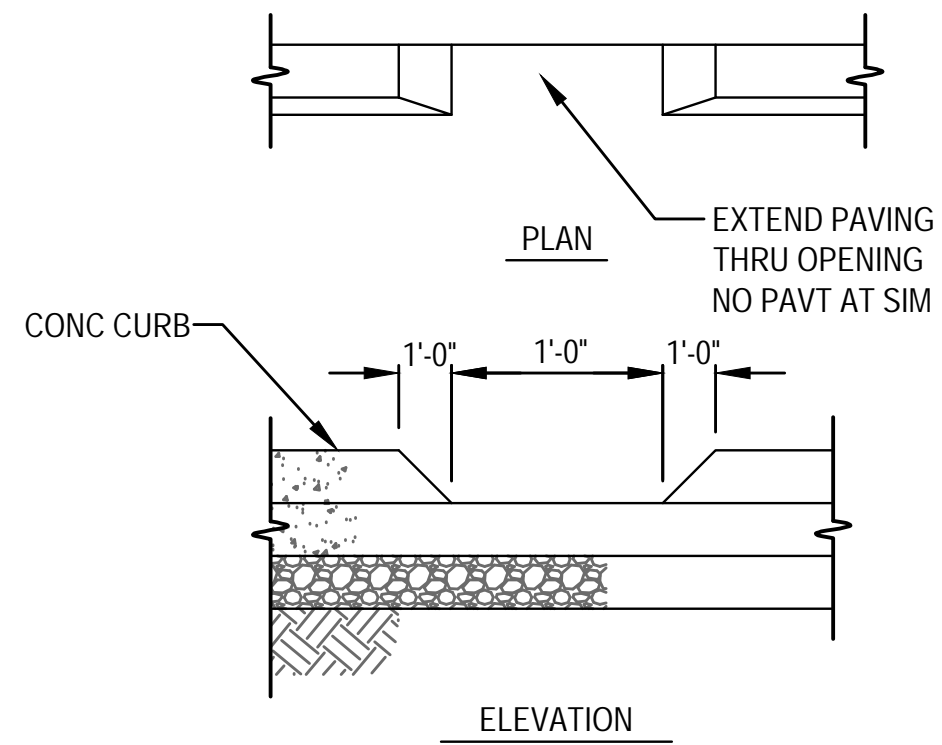
1 TYPICAL PAVEMENT SECTIONS
NOT TO SCALE

RE: PAVEMENT SECTIONS FOR THICKNESS "T"

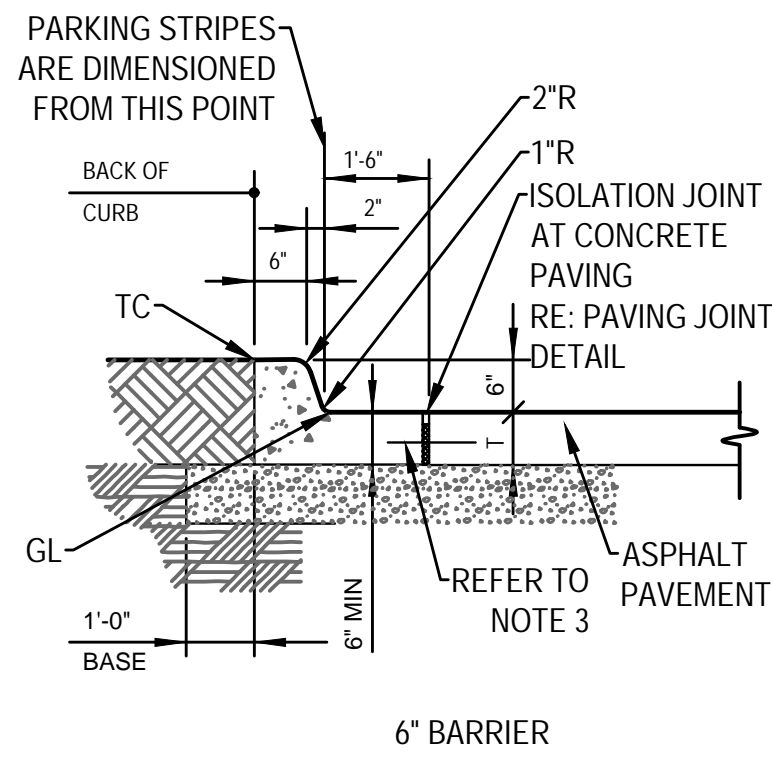
AT CONCRETE TO CONCRETE TRANSITIONS, USE A CONSTRUCTION JOINT IN LIEU OF THIS DETAIL



2 ASPHALT PAVEMENT TRANSITIONS
NOT TO SCALE

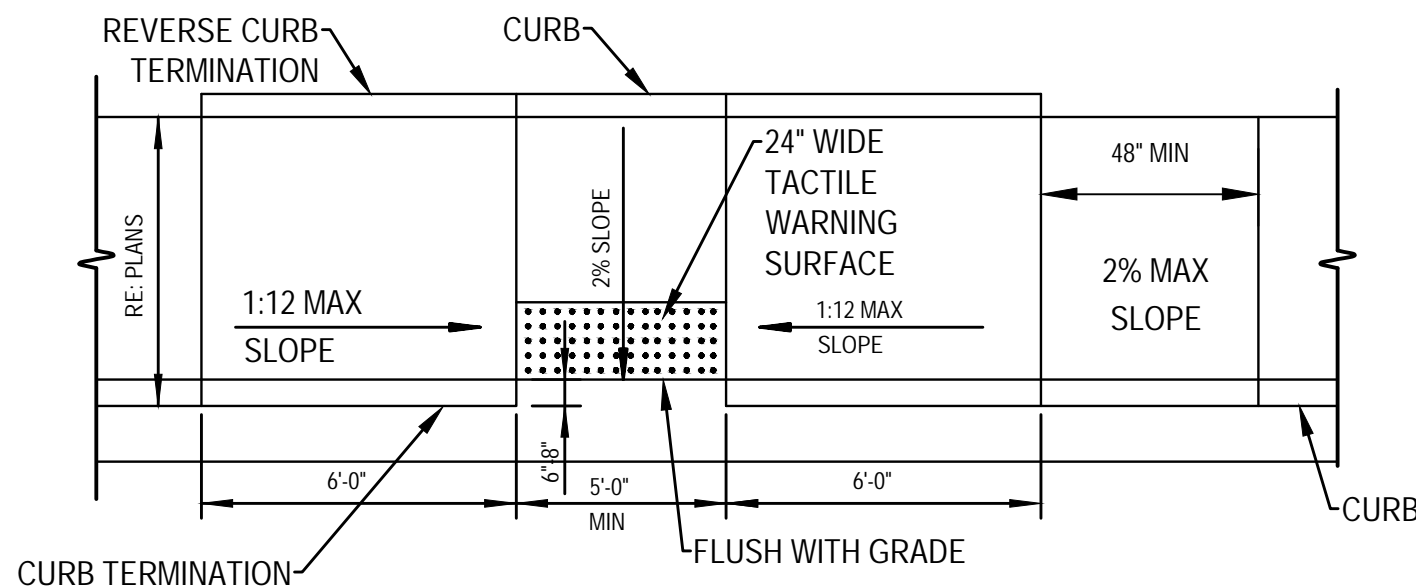


3 CURB CUT DRAIN
NOT TO SCALE

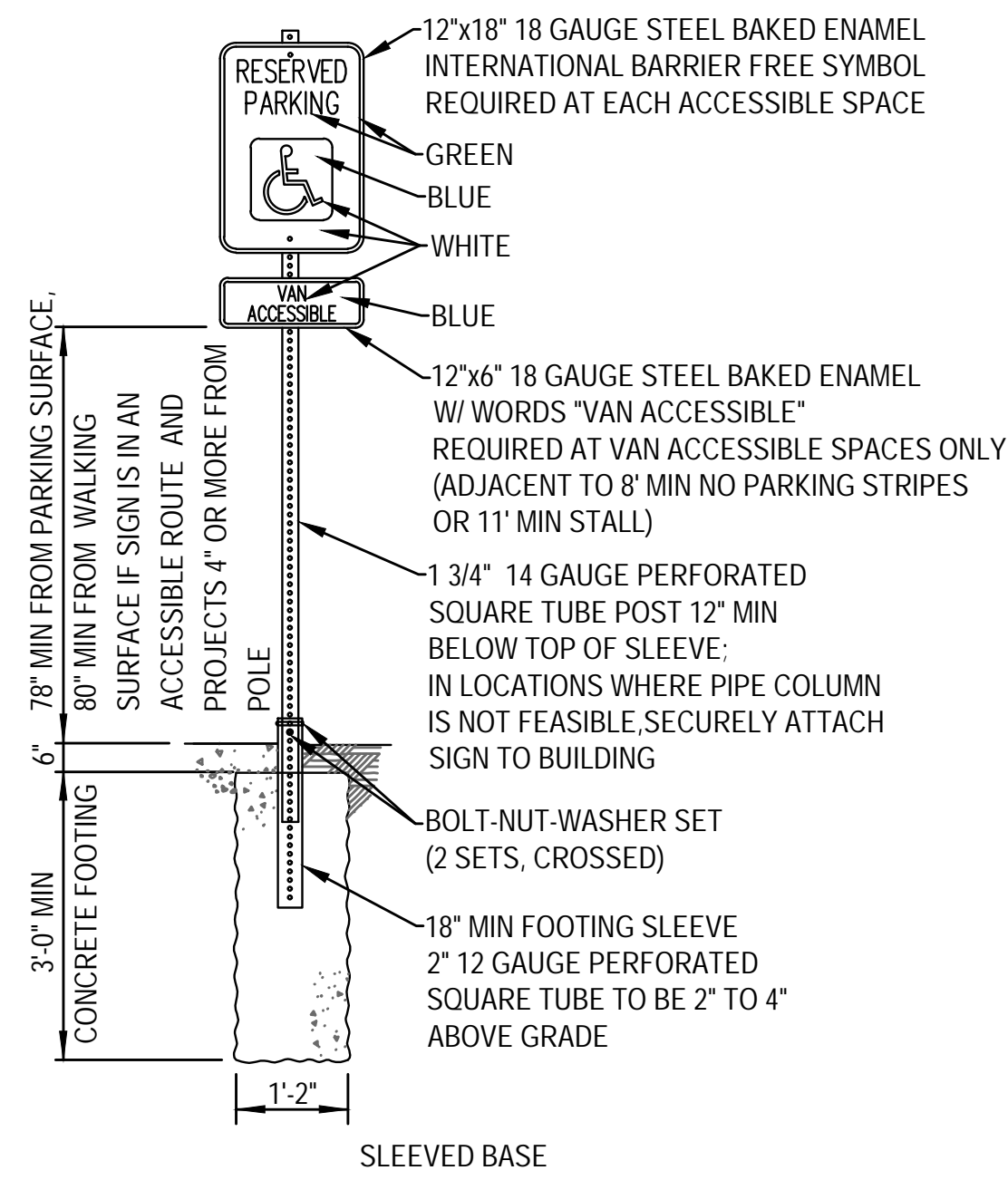


1. PLACE JOINTS IN CURB TO MATCH PAVING - 15 FEET MAX
2. RE: PAVEMENT SECTIONS FOR THICKNESS "T": 6" MIN
3. EPOXY COATED #4 X 30" DOWELS @ 30" C/C REQUIRED AT UNREINFORCED CURB ADJACENT TO CONCRETE PAVING
4. GUTTER TO SLOPE BACK TO CURB @ 1/4" PER FOOT (TYP).
5. WHEN USED ON THE HIGH SIDE OF ROAD, THE CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT AND THE MINIMUM THICKNESS SHALL BE 6"

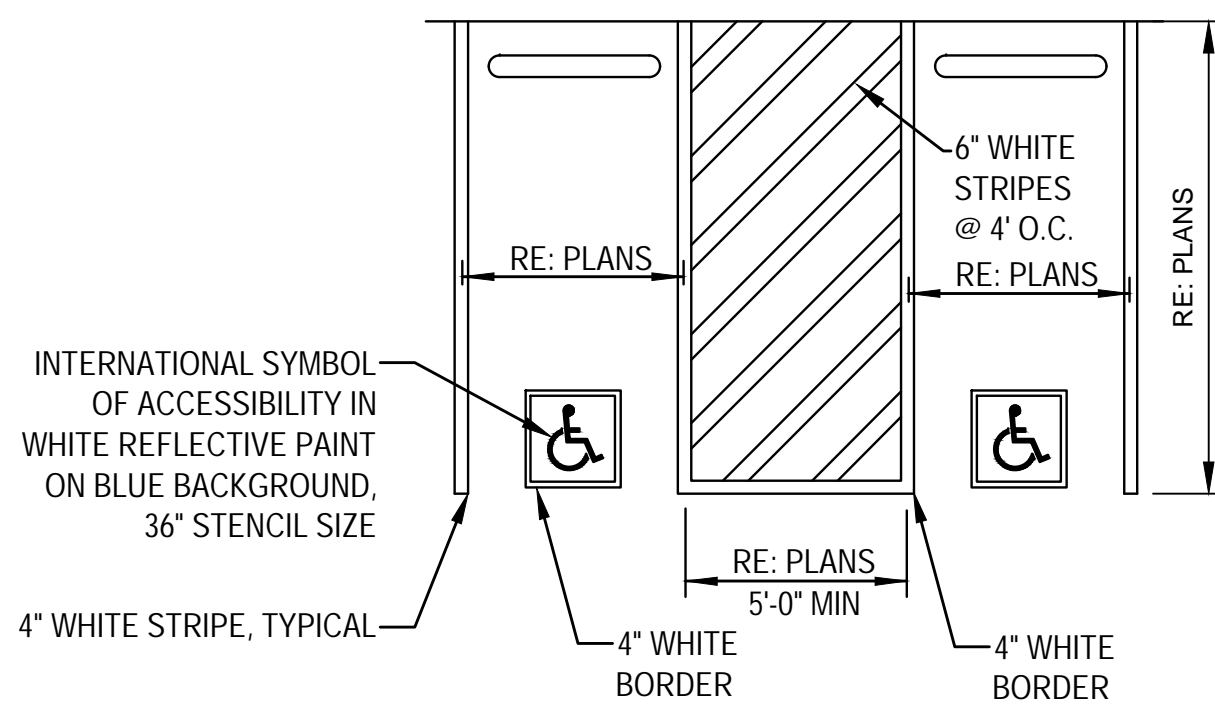
4 CONCRETE CURB AND GUTTER
NOT TO SCALE



5 CURB RAMP AT PARKING LOT
NOT TO SCALE



6 ACCESSIBLE SIGNAGE
NOT TO SCALE

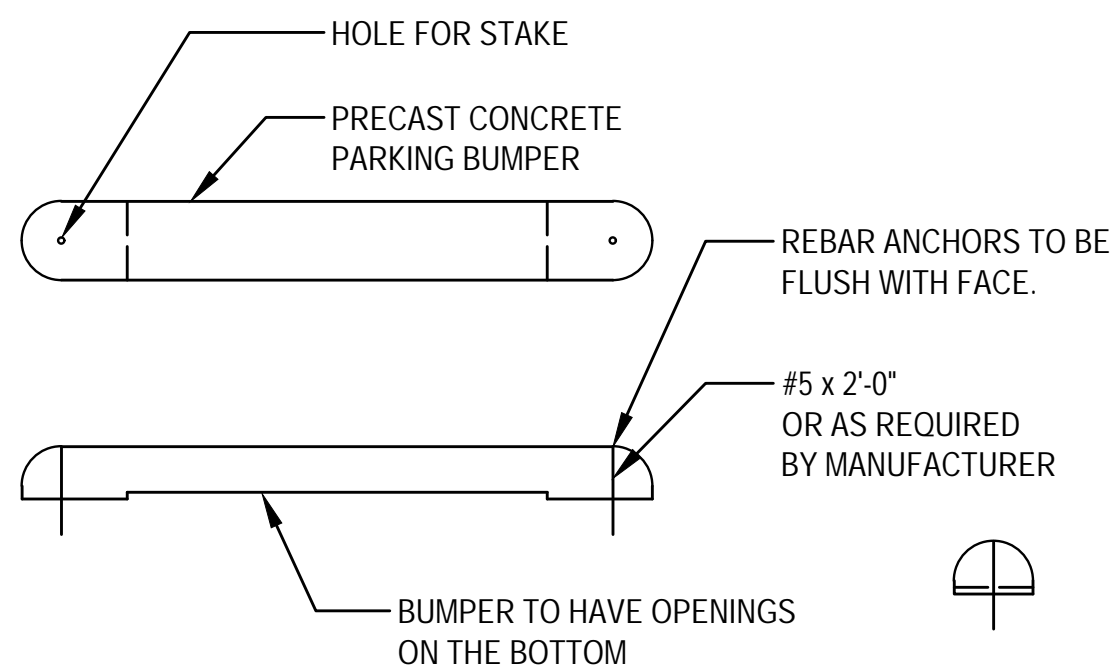


REFER TO SIGN, BUMPER, AND CURB RAMP DETAILS FOR ADDITIONAL INFORMATION AS APPLICABLE BASED ON THE SITE PLAN.

VAN ACCESSIBLE SPACES MUST BE -MIN 11' STALL W/ 5' AISLE OR -MIN 8' STALL W/ 8' AISLE
RE: PLANS FOR SPECIFIC DIMENSIONS

VAN SPACES AT ANGLED PARKING MUST HAVE THE ACCESS AISLE ON THE PASSENGER SIDE OF THE VEHICLE AND MEET THE WIDTH REQUIREMENTS FOR A VAN SPACE.

7 ACCESSIBLE STRIPING
NOT TO SCALE



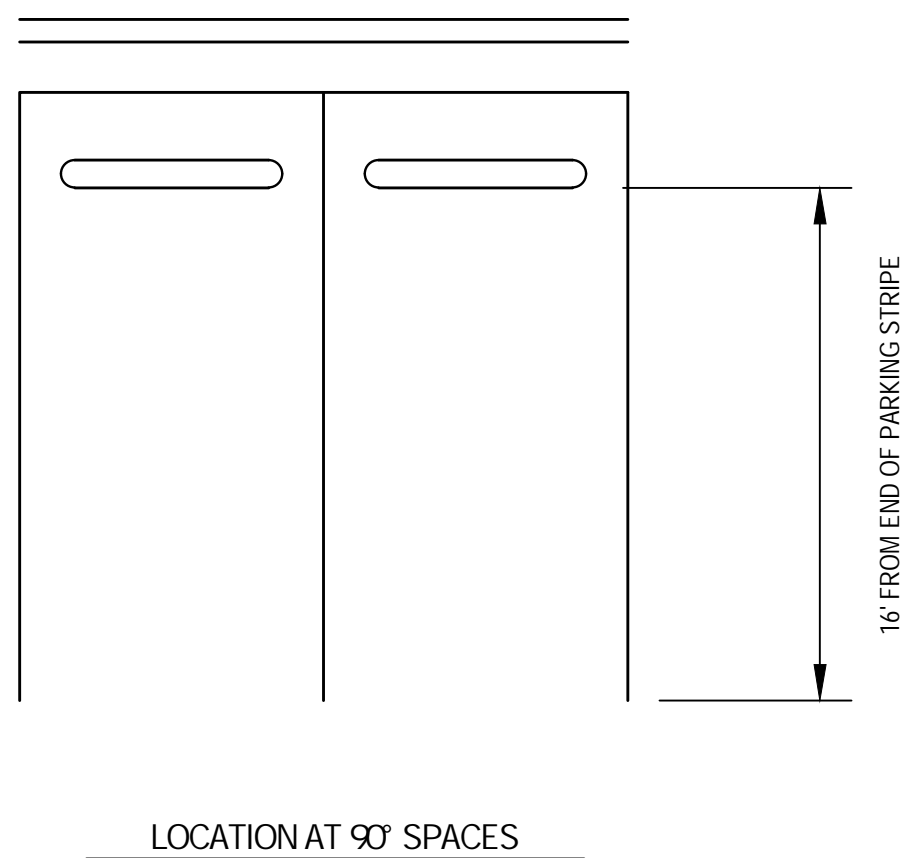
PARKING BUMPERS TO BE PRECAST CONCRETE

BUMPERS MUST HAVE OPEN SPACE UNDERNEATH

BUMPERS TO BE CENTERED BETWEEN PARKING STRIPES

A SUBMITTAL IS REQUIRED FOR PARKING BUMPERS FOR ENGINEER REVIEW

8 PARKING BUMPER AT ACCESSIBLE SPACES
NOT TO SCALE





wallace design collective, pc
structural/ civil/ landscape/ survey
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918.584.5858
oklahoma ca #ICAO3146
exp. date 06/30/25

City of Norman Parks & Recreation

John H. Saxon, Jr. Park

3016 36th Avenue SE
Norman, Oklahoma 73026



REVISIONS:

PROFESSIONAL SEAL:



ISSUE DATE:
December 9, 2024

90% CONSTRUCTION DOCUMENTS

DRAWN BY: RWR CHECKED BY: JJB
SHEET NAME:

LANDSCAPE NOTES

SHEET NUMBER:

L 1.00

DRAWING IS NOT TO SCALE
UNLESS PRINTED ON SHEET
SIZE: 22"x34" (ANSI D)

DEMOLITION NOTES

1. CONTRACTOR TO ASCERTAIN LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO EXCAVATION AND BE RESPONSIBLE FOR DAMAGE TO UTILITIES RESULTING FROM DEMOLITION OPERATIONS. REPAIRS SHALL BE MADE AT NO COST TO THE OWNER.
2. ALL UNDERGROUND UTILITIES MAY NOT BE SHOWN ON THE SURVEY. CONTACT THE LOCAL UTILITY LOCATION SERVICES PRIOR TO COMMENCING CONSTRUCTION OPERATIONS.
3. ALL SITE ELEMENTS AND TREES NOT NOTED TO BE REMOVED, ARE TO BE PROTECTED DURING DEMOLITION WORK.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ALL STRUCTURES, LANDSCAPING, PAVING AND OTHER ITEMS LOCATED WITHIN AND OUTSIDE WORK AREA. ANY DAMAGE TO PERMANENT ITEMS INCURRED BY THE CONTRACTOR THROUGH HIS WORK IN THIS CONTRACT SHALL BE REPAIRED TO ORIGINAL CONDITION BY THE CONTRACTOR AT HIS OWN EXPENSE. THIS INCLUDES BUT IS NOT LIMITED TO TOPDRESSING, OR FILLING WITH TOPSOIL AND RE-SODDING, AREAS DAMAGED BY DRIVING VEHICLES AND CONSTRUCTION EQUIPMENT ON LAWN AREAS.
5. CONTRACTOR TO MARK ALL TREES TO BE REMOVED AND REVIEW WITH THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO COMMENCING TREE REMOVAL OPERATIONS. ALL TREES TO REMAIN SHALL BE PROTECTED.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION PERMITS, PERMIT FEES, LICENSES, LICENSE FEES, DUMP FEES, ETC.
7. ANY CONCRETE AND ASPHALT NOTED FOR REMOVAL SHALL BE SAW CUT FULL DEPTH AND REMOVED OFF SITE.
8. CONTRACTOR SHALL PROTECT ALL SURVEY CONTROL POINTS.
9. ALL REMOVED ITEMS NOT DESIGNATED FOR SALVAGE SHALL BECOME THE PROPERTY OF THE CONTRACTOR FOR PROPER DISPOSAL, UNLESS OTHERWISE NOTED.
10. CONTRACTOR SHALL REMOVAL ALL WASTE MATERIALS OFF-SITE.
11. WITH PRIOR APPROVAL, CONTRACTOR MAY ESTABLISH AN ON-SITE STAGING AREA. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING STAGING AREA TO ITS ORIGINAL CONDITION. SECURITY OF STAGING AREA SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
12. ON-SITE VEGETATION SHALL BE PROTECTED AS NOTED. WHERE THE CONTRACTOR DOES NOT PROTECT VEGETATION IN DESIGNATED PROTECTION AREAS AS NOTED, CONTRACTOR SHALL RESTORE VEGETATION TO EXISTING CONDITION AT NO ADDITIONAL EXPENSE TO THE OWNER, TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT.
13. GRIND STUMPS ON REMOVED TREES TO A MINIMUM DEPTH OF 6" BELOW FINISHED GRADE.
14. PROTECT VEGETATION FROM COMPACTION OF SOIL IN THE ROOT ZONE. CONTRACTOR SHALL PROVIDE CONSTRUCTION FENCING TO KEEP ALL CONSTRUCTION ACTIVITIES AND VEHICLE PARKING AWAY FROM AREAS DESIGNATED TO REMAIN UNDISTURBED.
15. CONSTRUCTION FENCING IS REQUIRED. CONTRACTOR IS RESPONSIBLE FOR DETERMINING LOCATION AND QUANTITY OF FENCE AND GATES. PROVIDE EMERGENCY ACCESS.
16. UTILITY OUTAGES WILL NOT BE PERMITTED WITHOUT PRIOR WRITTEN CONSENT FROM OWNER AND/OR ARCHITECT.
17. BY SUBMITTING A BID, THE CONTRACTOR ACKNOWLEDGES HAVING VISITED THE SITE AND BECOME FAMILIAR WITH THE CONDITIONS RELATED TO THE DEMOLITION OF EXISTING SITE IMPROVEMENTS.

TREE PROTECTION NOTES

1. ALL TREES AND NATURAL AREAS SHOWN ON THIS PLAN TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION. TEMPORARY FENCING TO BE INSTALLED AS SHOWN.
2. PROTECTIVE FENCES SHALL BE INSTALLED PRIOR TO THE START OF ANY SITE PREPARATION WORK AND SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF THE CONSTRUCTION PROJECT.
3. EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD-UP WITHIN TREE DRIPLINES.
4. PROTECTIVE FENCES SHALL SURROUND THE TREES OR GROUP OF TREES, AND WILL BE LOCATED AT THE DRIPLINE. FOR NATURAL AREAS, PROTECTIVE FENCES SHALL FOLLOW THE LIMIT OF CONSTRUCTION LINE, IN ORDER TO PREVENT THE FOLLOWING:
 - A. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT.
 - B. ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN 6") OR TRENCHING NOT REVIEWED BY OWNER'S REPRESENTATIVE.
 - C. WOUNDS TO EXPOSED ROOTS, TRUNK OR LIMBS BY MECHANICAL EQUIPMENT.
 - D. OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CONCRETE TRUCK CLEANING, AND FIRES.
5. EXCEPTIONS TO INSTALLING FENCES AT TREE DRIPLINES MAY BE PERMITTED IN THE FOLLOWING CASES:
 - A. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, TREE WELL, OR OTHER SUCH SITE IMPROVEMENT.
 - B. WHERE PERMEABLE PAVING IS TO BE INSTALLED WITHIN A TREE'S DRIPLINE, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA (PRIOR TO SITE GRADING SO THAT THIS AREA IS GRADED SEPARATELY PRIOR TO PAVING INSTALLATION TO MINIMIZE ROOT DAMAGE).
 - C. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE TO ALLOW 6 TO 10 FEET OF WORKSPACE BETWEEN THE FENCE AND THE BUILDING.
 - D. WHERE THERE ARE SEVERE SPACE CONSTRAINTS DUE TO TRACT SIZE, OR OTHER SPECIAL REQUIREMENTS.
6. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE BEING CLOSER THAN 4 FEET TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF 8 FEET (OR LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING PROVIDED.
7. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
8. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOPSOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN 2 DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
9. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
10. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN 4 INCHES SHALL BE PERMITTED WITHIN THE DRIPLINE OF TREES. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
11. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC, AND EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS.
12. ALL FINISHED PRUNING MUST BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY. (REFERENCE THE NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES)

GRADING NOTES

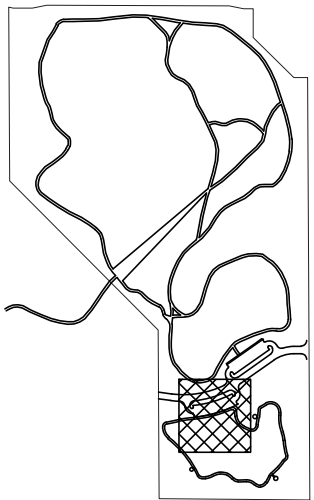
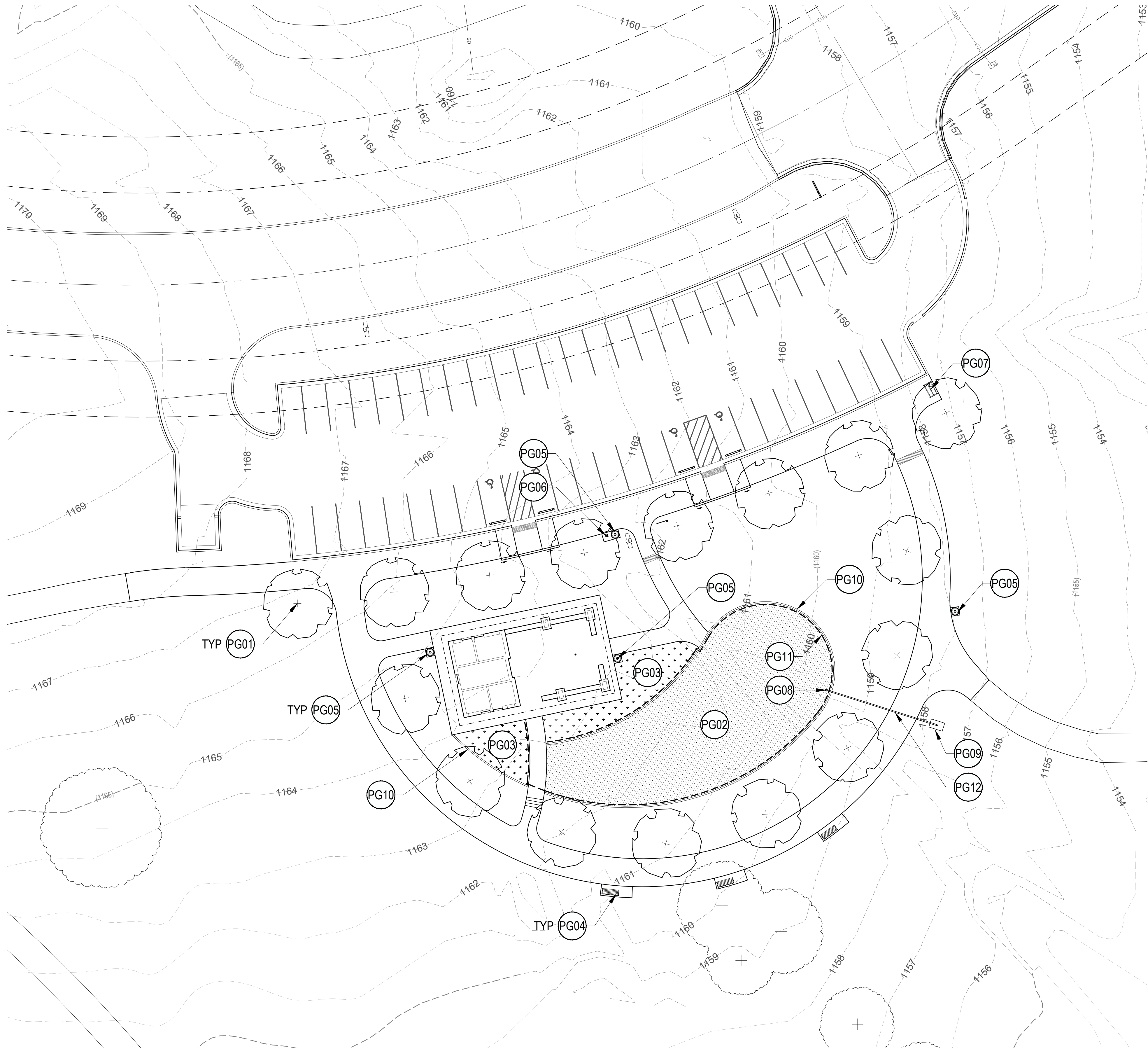
1. CONTRACTOR TO ASCERTAIN LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO EXCAVATION AND BE RESPONSIBLE FOR DAMAGE TO UTILITIES RESULTING FROM GRADING OPERATIONS. REPAIRS SHALL BE MADE AT NO COST TO THE OWNER.
2. ALL UNDERGROUND UTILITIES MAY NOT BE SHOWN ON THE SURVEY. CONTACT THE LOCAL UTILITY LOCATION SERVICES PRIOR TO COMMENCING CONSTRUCTION OPERATIONS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ALL STRUCTURES, LANDSCAPING, PAVING AND OTHER ITEMS LOCATED WITHIN AND OUTSIDE WORK AREA. ANY DAMAGE TO PERMANENT ITEMS INCURRED BY THE CONTRACTOR THROUGH HIS WORK IN THIS CONTRACT SHALL BE REPAIRED TO ORIGINAL CONDITION BY THE CONTRACTOR AT HIS OWN EXPENSE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL GRADING AND EARTH CHANGE PERMITS, PERMIT FEES, LICENSES, LICENSE FEES, SOIL IMPORT AND HAUL-OFF FEES, ETC.
5. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED, INSPECTED AND APPROVED BY LOCAL AUTHORITIES.
6. ALL AREAS OF THE SITE IDENTIFIED FOR LAWN PLANTING SHALL RECEIVE 6" OF TOPSOIL, AND SHRUB AND GROUND COVER PLANTING AREAS SHALL RECEIVE A MINIMUM OF 12" OF TOPSOIL, UNLESS OTHERWISE NOTED. IN CONSTRUCTION AREAS, STAGING AREAS, AND CONSTRUCTION TRAFFIC AREAS, THE TOPSOIL SHALL NOT BE PLACED UNTIL THE PROJECT IS READY FOR PLANTING. CONTRACTOR SHALL GRADE THE SUBGRADE TO THE REQUIRED ELEVATION TO RECEIVE TOPSOIL AND GAIN APPROVAL FROM THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING. AFTER APPROVAL, ENTIRE AREA TO BE RIPPED OR SCARIFIED TO A MINIMUM DEPTH OF 6", AND ALL STONES, CLODS, ROOTS AND CONSTRUCTION DEBRIS LARGER THAN 2" DIAMETER THAT IS BROUGHT TO THE SURFACE SHALL BE REMOVED. PLACE TOPSOIL TO THE PROFILE INDICATED AND LIGHTLY COMPACT.
7. FINISHED GRADE FOR SHRUB, GROUND COVER, AND LAWN AREAS TO BE HELD 1" BELOW THE TOP OF ADJACENT PAVEMENT AND CURBS UNLESS OTHERWISE NOTED.
8. ALL CUT AND FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
9. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES ARE TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
10. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR OR REPLACE THE EXISTING STRUCTURE AS NECESSARY.
11. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS AND STRUCTURES FOR ALL GRASSED AND PAVED AREAS.
12. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO THE SAME.
13. SIDEWALKS SHALL NOT EXCEED A MAXIMUM 2% CROSS-SLOPE, AND A MAXIMUM 5% SLOPE IN THE DIRECTION OF TRAVEL UNLESS HANDRAILS ARE PROVIDED EACH SIDE OF WALK PER ADA REQUIREMENTS.
14. TRANSITIONS IN GRADE SHALL BE SMOOTH AND UNBROKEN UNLESS OTHERWISE NOTED.
15. GRADING SHOULD PROVIDE A MINIMUM 1% SLOPE ON PAVED AREAS, AND 2% IN LAWN AREAS, TOWARD DRAINS OR SWALES. CONTRACTOR TO INFORM ENGINEER OR LANDSCAPE ARCHITECT WHERE SLOPES FALL BELOW THE MINIMUM OR WHERE PONDING IS ANTICIPATED. PRIOR TO COMPLETING ESTABLISHMENT OF FINAL GRADE.
16. NEW SIDEWALK ELEVATIONS SHALL MATCH THE GRADE OF EXISTING WALKWAYS WHERE THEY MEET. ELEVATION CHANGE OUTSIDE OF DOORS SHALL NOT EXCEED ½" AND SHALL MEET ALL REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.
17. BY SUBMITTING A BID, THE CONTRACTOR ACKNOWLEDGES HAVING VISITED THE SITE AND BECOME FAMILIAR WITH THE CONDITIONS RELATED TO THE INSTALLATION OF SITE IMPROVEMENTS.

LAYOUT NOTES

1. CONTRACTOR TO ASCERTAIN LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO EXCAVATION AND BE RESPONSIBLE FOR DAMAGE TO UTILITIES RESULTING FROM CONSTRUCTION OPERATIONS. REPAIRS SHALL BE MADE AT NO COST TO THE OWNER.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ALL STRUCTURES, LANDSCAPING, PAVING AND OTHER ITEMS LOCATED WITHIN AND OUTSIDE WORK AREA. ANY DAMAGE TO PERMANENT ITEMS INCURRED BY THE CONTRACTOR THROUGH HIS WORK IN THIS CONTRACT SHALL BE REPAIRED TO ORIGINAL CONDITION BY THE CONTRACTOR AT HIS OWN EXPENSE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION PERMITS, PERMIT FEES, LICENSES, LICENSE FEES, ETC.
4. ALL CONSTRUCTION TO BE IN STRICT ACCORDANCE WITH LOCAL CITY, STATE, AND NATIONAL CODES AND ORDINANCES.
5. NO DIMENSION MAY BE SCALED. REFER UNCLEAR ITEMS TO THE LANDSCAPE ARCHITECT OR ENGINEER FOR INTERPRETATION.
6. DIMENSIONS ARE PROVIDED FOR GENERAL LAYOUT. SIDEWALK LOCATION TO BE STAKED ALONG THE CENTERLINE FOR APPROVAL PRIOR TO COMMENCING CONSTRUCTION. SIDEWALK FORMWORK SHALL PROVIDE SMOOTH AND UNBROKEN CURVES IN HORIZONTAL AND VERTICAL ALIGNMENTS.
7. IF PAVEMENT JOINTS ARE NOT INDICATED ON THE PLAN, CONTRACTOR SHALL PROVIDE A SUBMITTAL FOR JOINT LAYOUT FOR APPROVAL BY LANDSCAPE ARCHITECT OR ENGINEER.
8. PROVIDE EXPANSION JOINTS IN CONCRETE SIDEWALK AT A MAXIMUM SPACING NOT EXCEEDING 50'. MAXIMUM SPACING BETWEEN EXPANSION JOINTS IN CONCRETE CURB AND GUTTER SHALL BE 150' OR AS DICTATED BY LOCAL GUIDELINES.

PLANTING NOTES

1. CONTRACTOR TO ASCERTAIN LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO EXCAVATION AND BE RESPONSIBLE FOR DAMAGE RESULTING FROM PLANTING OPERATIONS. REPAIRS SHALL BE MADE AT NO COST TO THE OWNER.
2. ALL UNDERGROUND UTILITIES MAY NOT BE SHOWN ON THE SURVEY. CONTACT THE LOCAL UTILITY LOCATION SERVICES PRIOR TO COMMENCING CONSTRUCTION OPERATIONS.
3. ALL AREAS NOTED AS "LAWN" ON PLAN, AND ALL OTHER AREAS ON SITE WHICH ARE NOT OTHERWISE DESIGNATED AND ARE DAMAGED BY CONSTRUCTION, ARE TO BE PLANTED WITH SOLID SOD BERMUDA GRASS.
4. ALL PLANTING BEDS THAT ABUT LAWN AREAS TO BE BORDERED BY STEEL EDGING.
5. FINISH GRADE FOR SHRUB, GROUND COVER, AND LAWN AREAS SHALL BE HELD 1" BELOW TOP OF ADJACENT PAVEMENT AND CURBS UNLESS OTHERWISE NOTED ON DRAWINGS.
6. FIELD STAKE LOCATIONS OF PROPOSED TREES FOR REVIEW AND APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO DELIVERY OF TREES.
7. FOR ADDITIONAL PLANTING REQUIREMENTS REFER TO SPECIFICATIONS.
8. BY SUBMITTING A BID, THE CONTRACTOR ACKNOWLEDGES HAVING VISITED THE SITE AND BECOME FAMILIAR WITH THE CONDITIONS RELATED TO THE INSTALLATION OF SITE IMPROVEMENTS.



KEY PLAN

LEGEND

- EXISTING TREE TO REMAIN,
PROTECT IN PLACE
- TREE PLANTING BY OWNER
(16 SHOWN ON PLAN)
- PLAYGROUND PERFORATED
CORRUGATED DRAIN PIPE,
REFER DETAIL 1/L2.02
- PLAYGROUND SURFACING,
REFER DETAIL 1/L2.02
- ARTIFICIAL TURF SURFACE,
REFER DETAIL 1/L2.02
- PARK BENCH (3 SHOWN ON PLAN)
REFER DETAIL 2/L2.01
- TRASH RECEPTACLE (4 SHOWN
ON PLAN) REFER DETAIL 6/L2.01
- DOG WASTE STATION (1 SHOWN
ON PLAN) REFER DETAIL 7/L2.01
- BIKE RACK (1 SHOWN ON PLAN)

PLAYGROUND & SITE FURNITURE NOTES

- THE FOLLOWING ITEMS WILL BE PURCHASED AND INSTALLED UNDER A SEPARATE CONTRACT THAT IS ADMINISTERED BY OWNER (CITY OF NORMAN PARKS & RECREATION DEPARTMENT)
- TREE PLANTING TO BE PURCHASED AND INSTALLED UNDER SEPARATE CONTRACT.
 - PLAYGROUND SURFACE, BASE MATERIAL, AND PLAYGROUND EQUIPMENT WILL BE PURCHASED AND INSTALLED UNDER SEPARATE CONTRACT. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR SITE PREPARATION INCLUDING EARTHWORK AND GRADING. SUBGRADE AT PLAYGROUND AREA TO BE LEFT 10" LOWER THAN TOP OF CURB GRADE TO PROVIDE PREPARED SURFACE FOR WORK BY OTHERS; AGGREGATE BASE, CONCRETE BASE AND PLAYGROUND SURFACING, REF. DETAIL 1/L2.02.
 - ARTIFICIAL TURF TO BE PURCHASED AND INSTALLED UNDER SEPARATE CONTRACT. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR SITE PREPARATION INCLUDING EARTHWORK AND GRADING. SUBGRADE AT ARTIFICIAL TURF AREA TO BE LEFT 6" LOWER THAN TOP OF CURB TO PROVIDE PREPARED SURFACE FOR WORK BY OTHERS; AGGREGATE BASE AND TURF SURFACING, REF. DETAIL 2/L2.02.
 - PARK BENCHES, TRASH RECEPTACLES, AND BIKE RACK WILL BE PURCHASED AND SURFACE MOUNTED UNDER SEPARATE CONTRACT. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR INSTALLING CONCRETE PADS, REF. DETAILS L2.01.
 - DOG WASTE STATION WILL BE PURCHASED AND AFFIXED TO 2" SQUARE TUBE SLEEVE UNDER SEPARATE CONTRACT. GENERAL CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE FOOTING WITH 2" SQUARE TUBE SLEEVE EMBEDDED, AND CONCRETE PAD, REF. DETAIL 7/L2.01.

KEYNOTES - PLAYGROUND PLAN

PG01	DECIDUOUS SHADE CANOPY TREE (NOT IN CONTRACT)
PG02	PLAYGROUND EQUIPMENT AND SURFACING (NOT IN CONTRACT); CONCRETE CURB AND DRAINAGE BY GENERAL CONTRACTOR, REFER DETAIL 1/L2.02
PG03	ARTIFICIAL TURF (NOT IN CONTRACT); CONCRETE CURB AND DRAINAGE BY GENERAL CONTRACTOR, REFER DETAIL 1/L2.02
PG04	BENCH; REFER DETAIL 2/L2.01. CONCRETE PAD 11'x4' BY GENERAL CONTRACTOR, BENCH TO BE FURNISHED AND SURFACE MOUNTED BY OWNER.
PG05	TRASH RECEPTACLE; REF. DETAIL 6/L2.01. CONCRETE PAD 3'x3' BY GENERAL CONTRACTOR, TRASH RECEPTACLE TO BE FURNISHED AND SURFACE MOUNTED BY OWNER.
PG06	DOG WASTE STATION; REF. DETAIL 7/L2.01. CONCRETE PAD 3'x3' BY GENERAL CONTRACTOR, DOG WASTE STATION TO BE FURNISHED AND MOUNTED BY OWNER.
PG07	BIKE RACK (NOT IN CONTRACT) TO BE FURNISHED AND SURFACE MOUNTED BY OWNER
PG08	DRAIN CLEANOUT, REFER DETAIL 5/C6.02
PG09	CONCRETE SLOPED DRAIN END TREATMENT, REFER DETAIL 6/C6.02
PG10	CONCRETE CURB AT PLAYGROUND AND ARTIFICIAL TURF, REF DETAIL 1/L2.02
PG11	4" PERFORATED CORRUGATED DRAIN PIPE AROUND PLAYGROUND AND ARTIFICIAL TURF, REF DETAIL 1/L2.02
PG12	4" SOLID PVC DRAIN PIPE CONNECTION FROM PLAYGROUND TO CONCRETE SLOPED DRAIN END TREATMENT, SLOPE AT 0.5% MINIMUM, REFER GRADING PLAN DRAWING C4.01

1 PLAYGROUND & SITE FURNITURE PLAN
1"=20'-0"



REVISIONS:

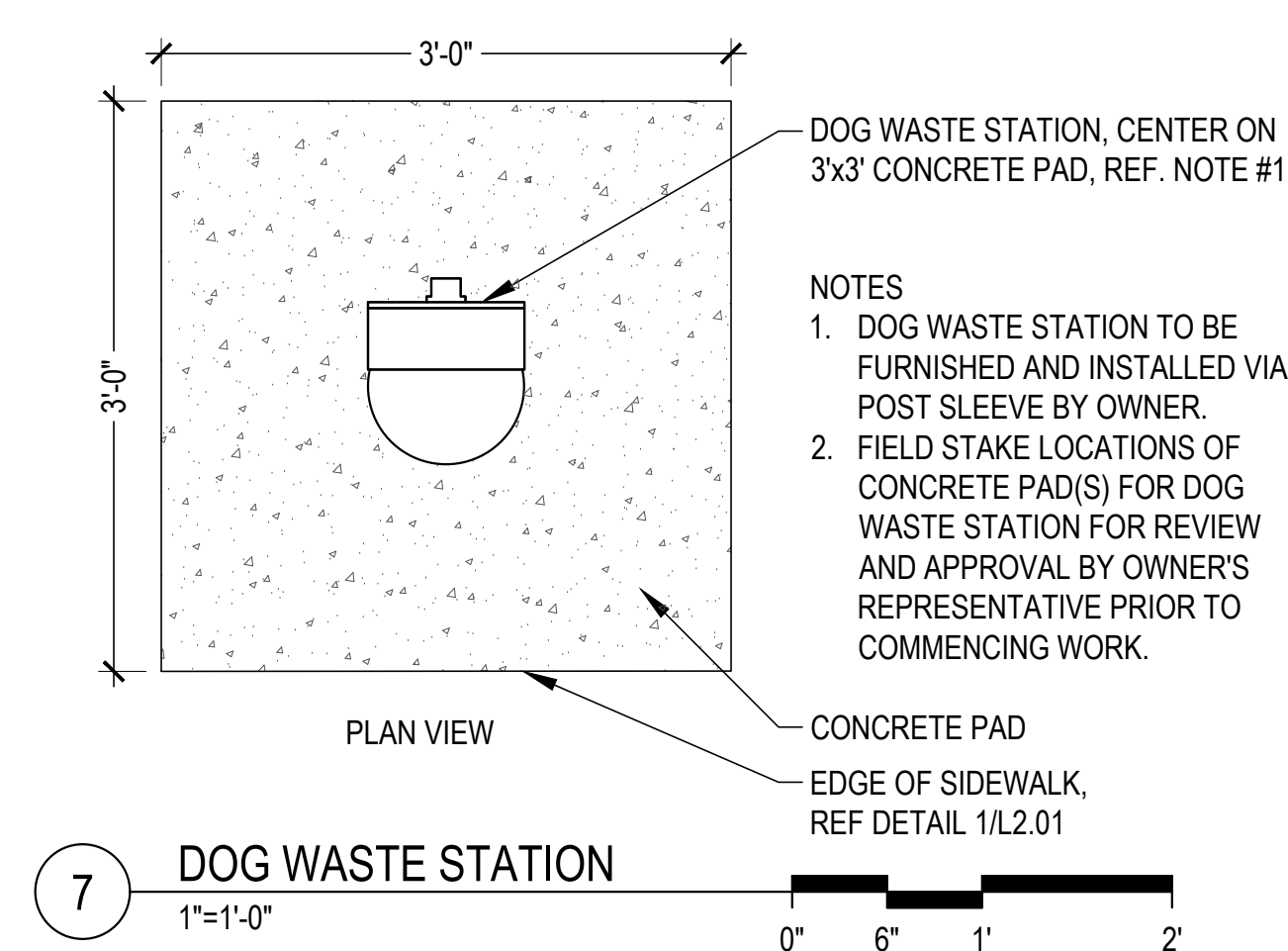
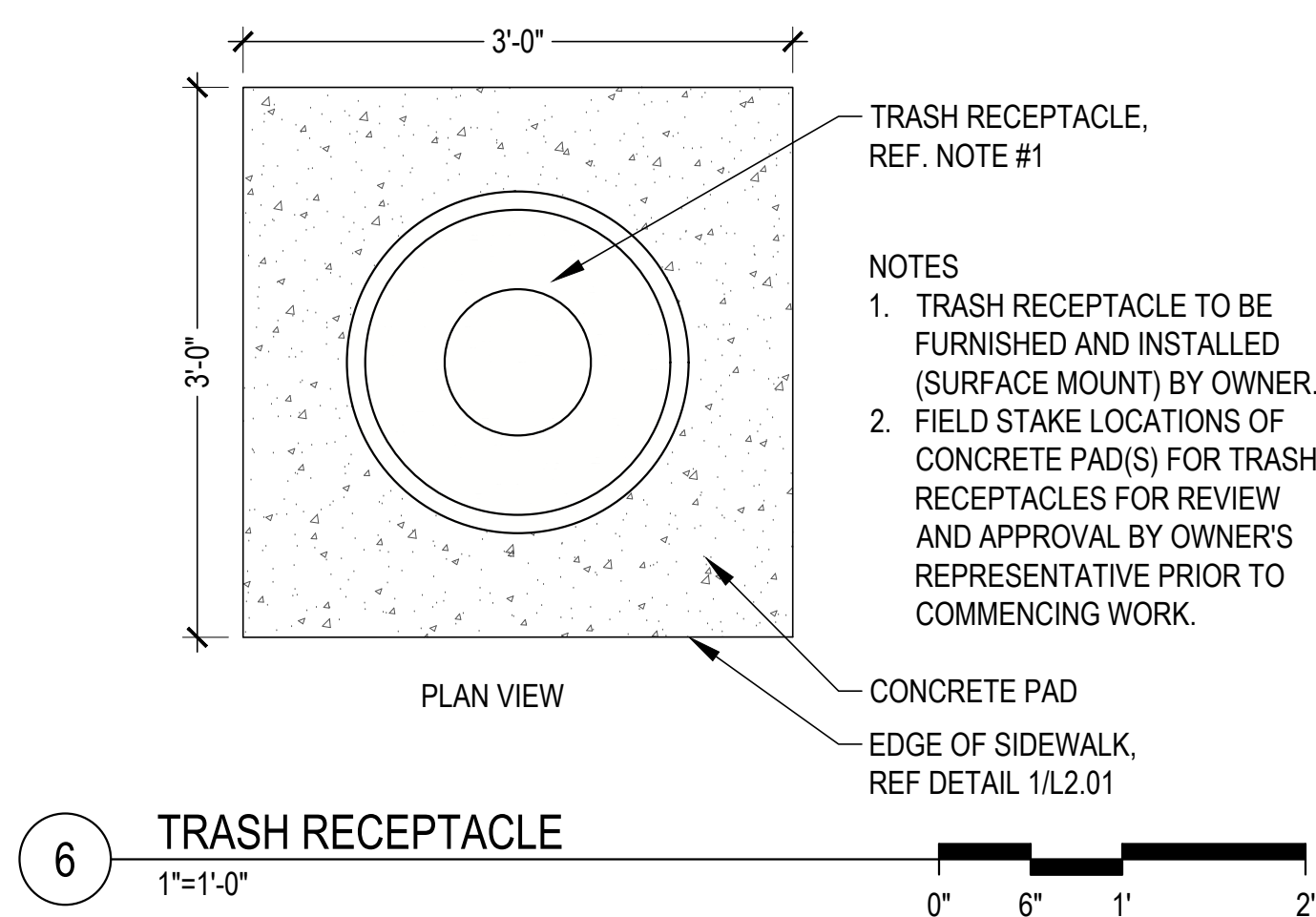
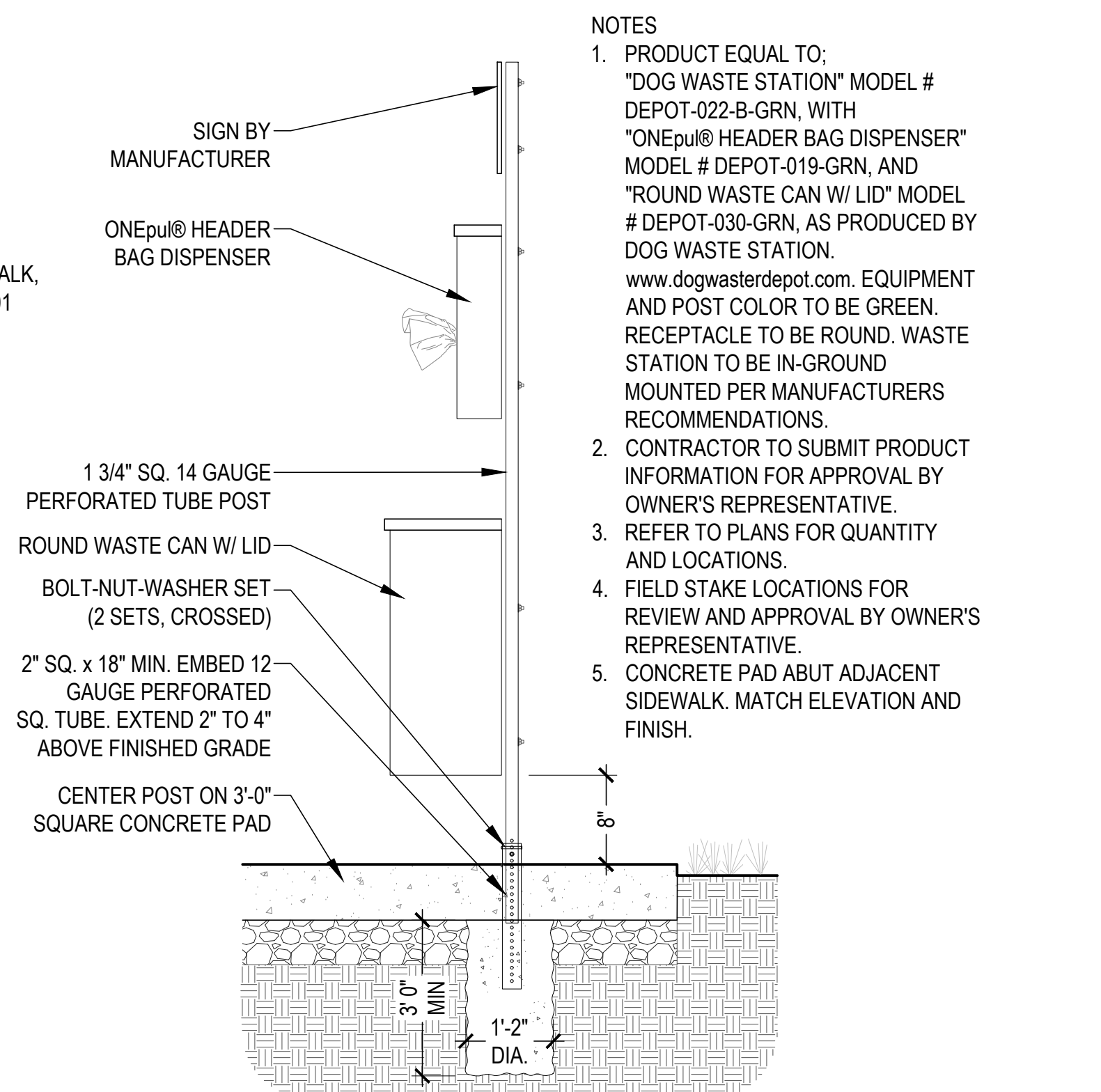
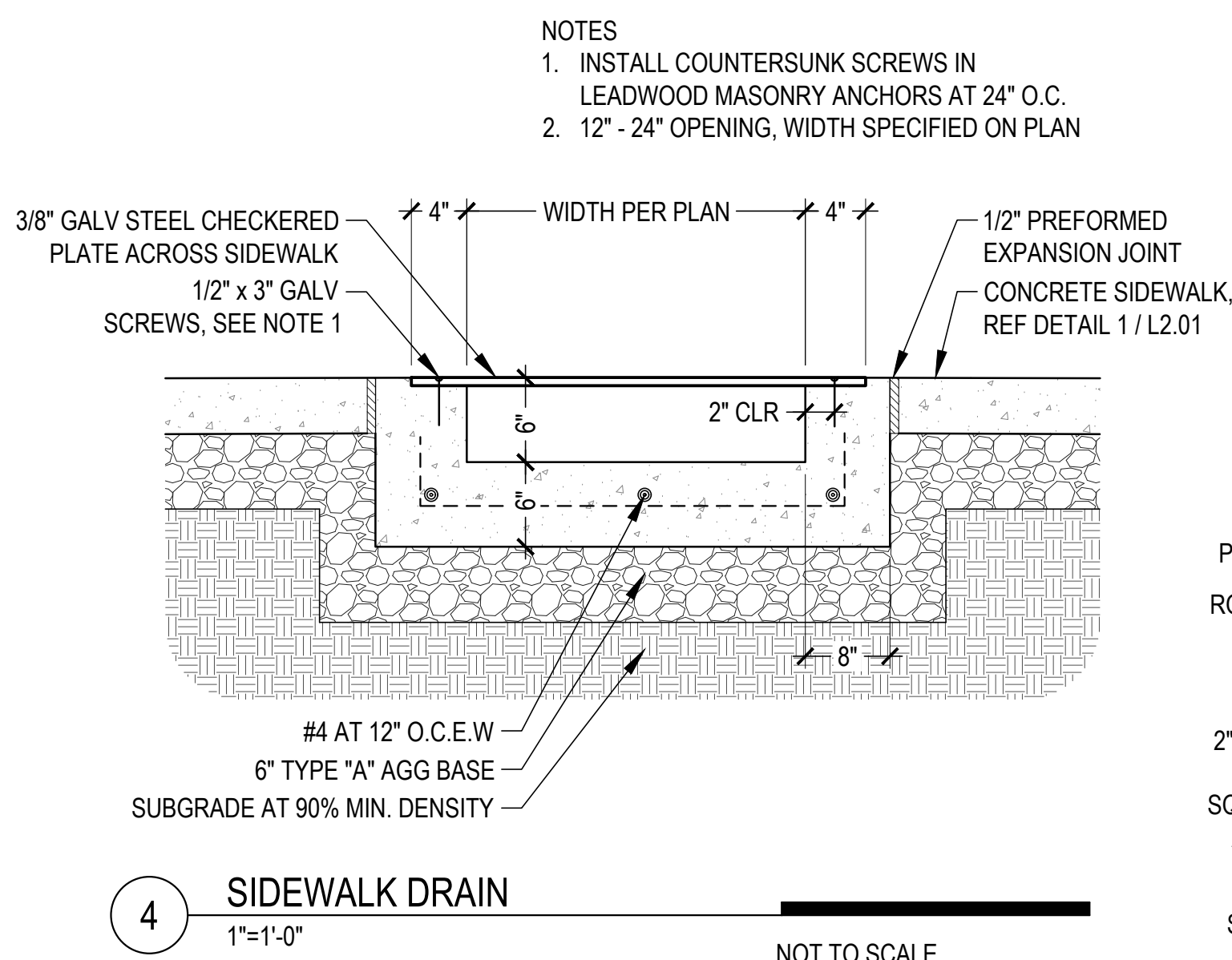
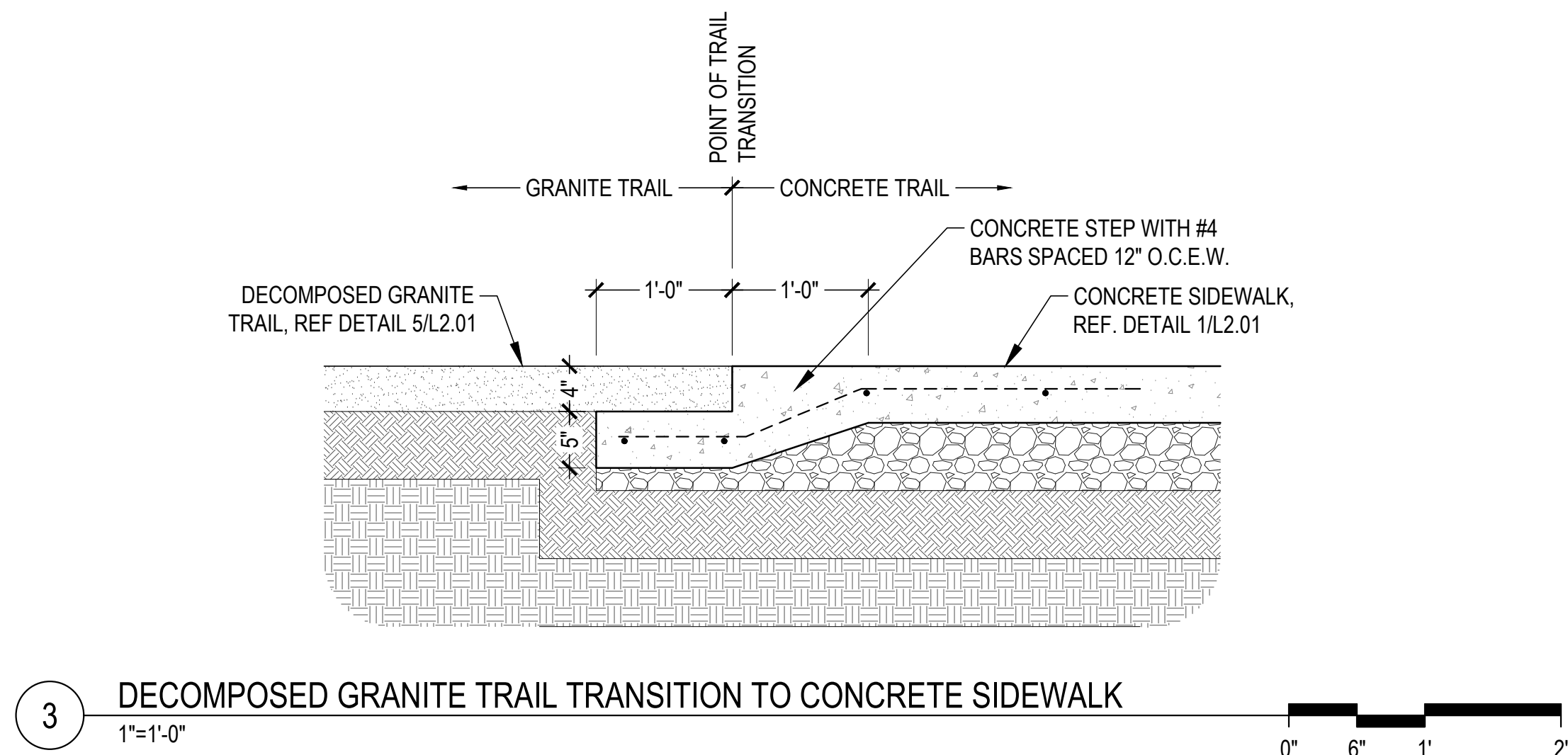
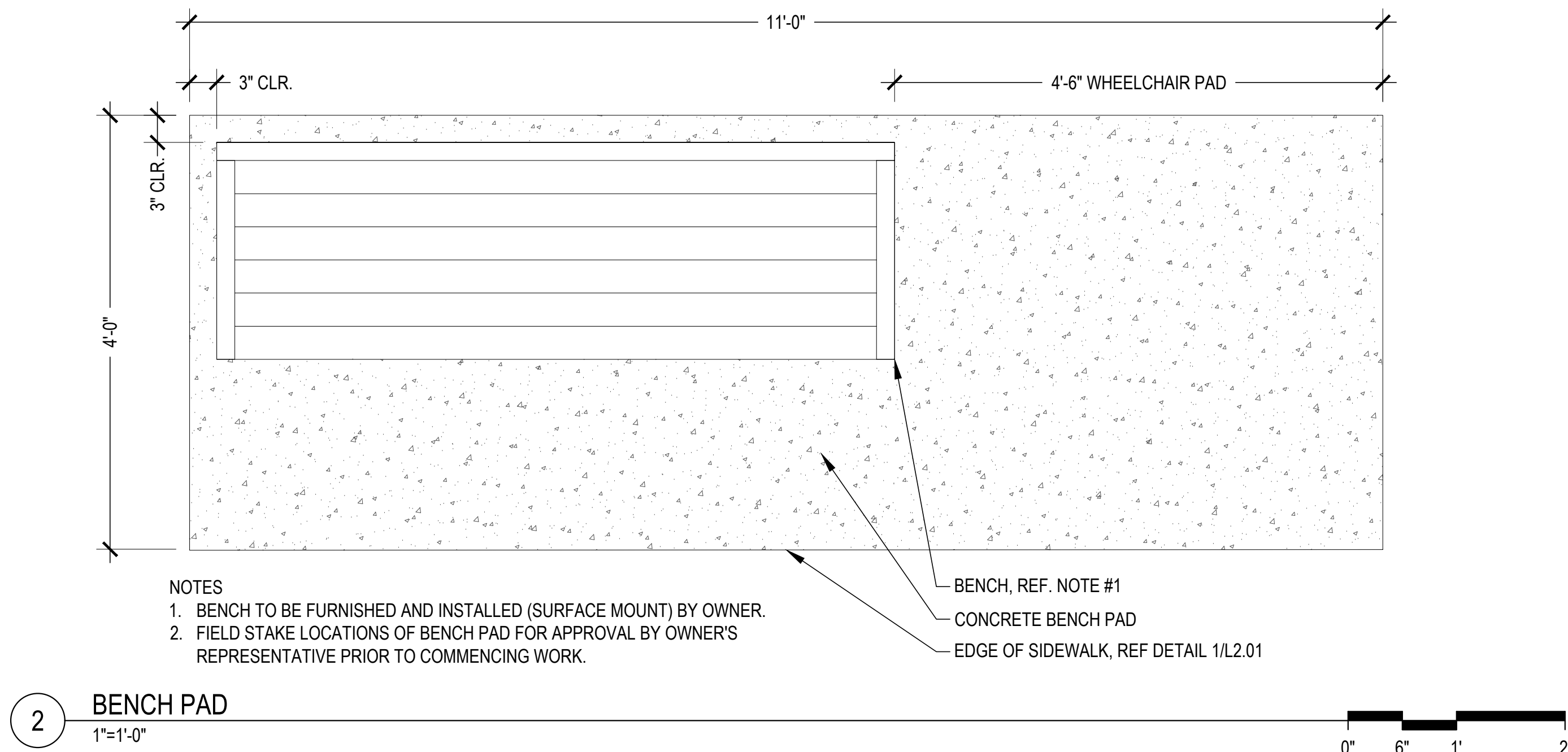
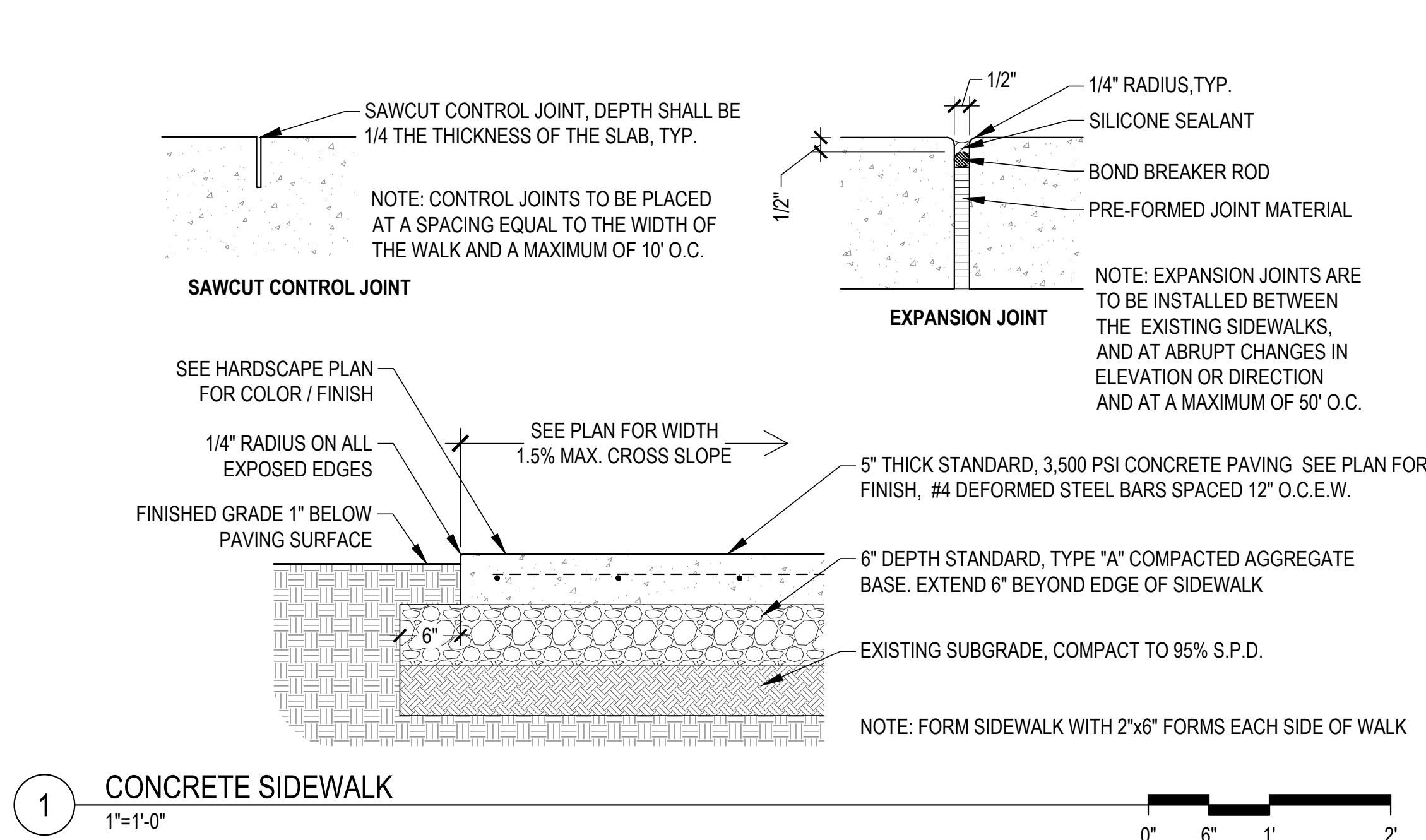
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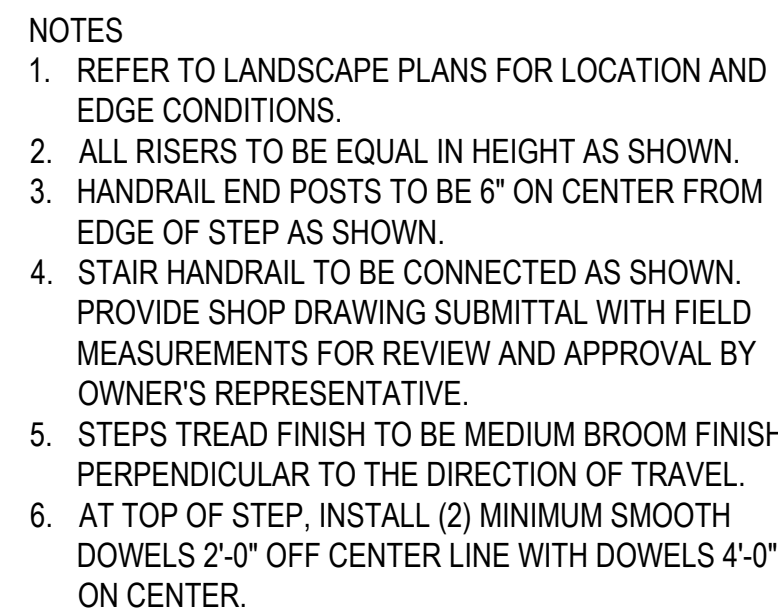


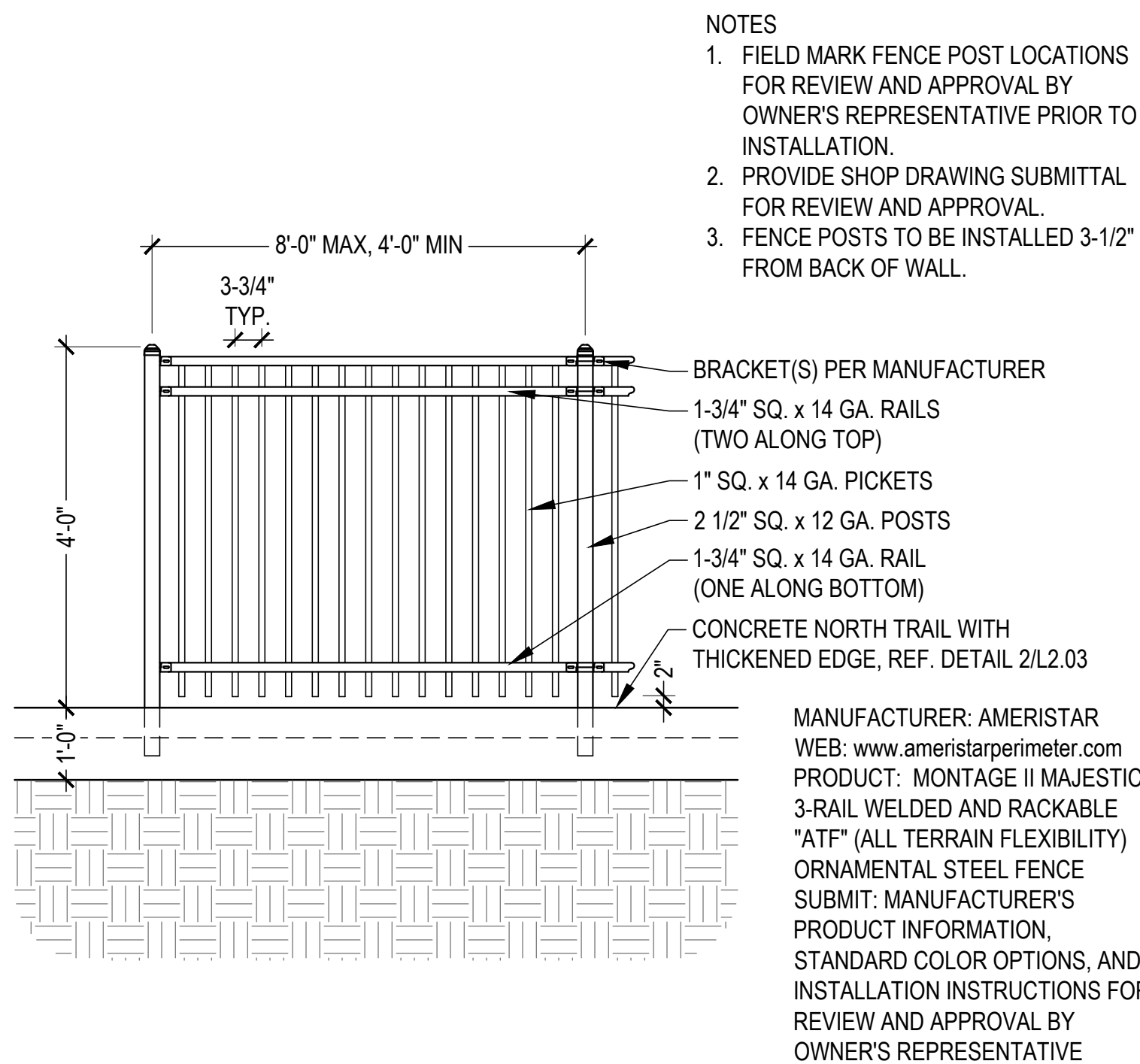
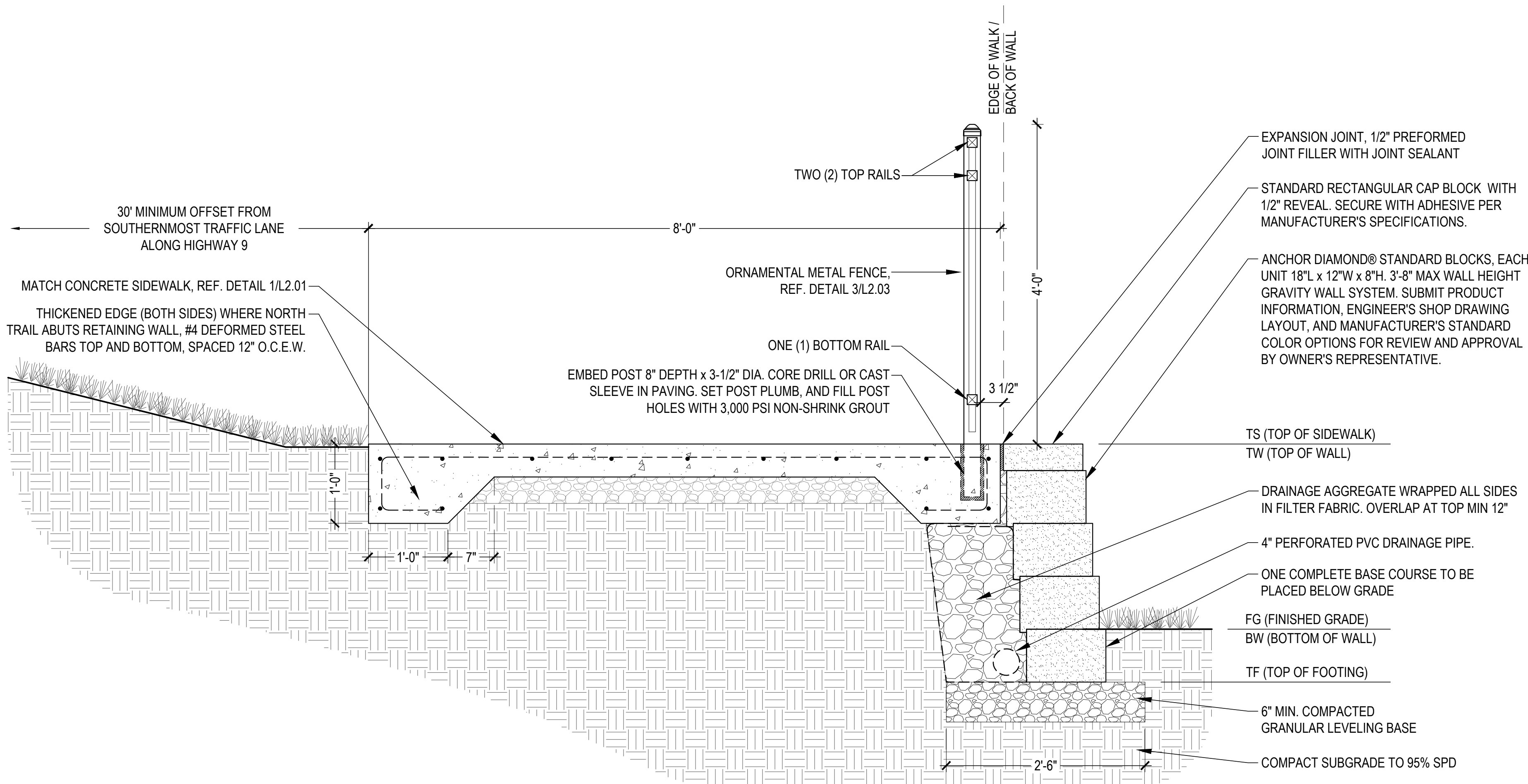
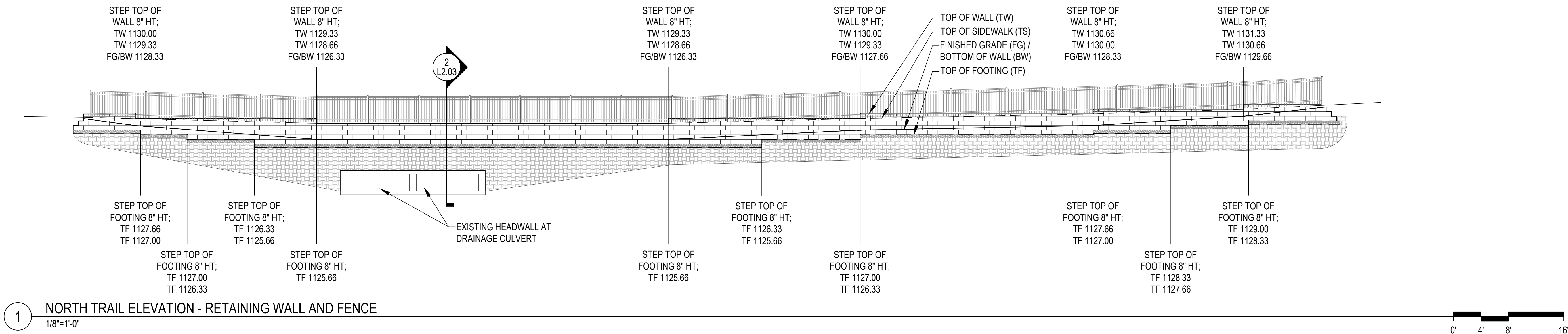
ISSUE DATE:
December 9, 2024

90% CONSTRUCTION DOCUMENTS

DRAWN BY: RWR CHECKED BY: JJB
SHEET NAME:
PLAYGROUND & SITE
FURNITURE PLAN
SHEET NUMBER:

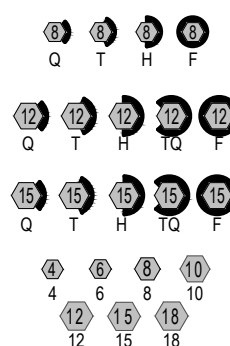








SYMBOL



MANUFACTURER/MODEL/DESCRIPTION

RAIN BIRD 1804-PRS 8 12, 15, AND ADJ SERIES MPR
TURF SPRAY 4.0IN. POP-UP SPRINKLER WITH
CO-MOLDED WIPER SEAL. 1/2IN. NPT FEMALE THREADED
INLET. PRESSURE REGULATING.

RAIN BIRD R-VAN24 1804-SAM-P45
TURF ROTARY, 17FT.-24FT. 45-270 DEGREES AND 360
DEGREES. HAND ADJUSTABLE MULTI-STREAM ROTARY
W/1800 TURF SPRAY BODY ON 4IN. POP-UP, WITH CHECK
VALVE AND 45 PSI IN-STEM PRESSURE REGULATOR.
1/2IN. NPT FEMALE THREADED INLET.

SYMBOL



RAIN BIRD PEB
1IN., 1-1/2IN., 2IN., 3IN. PLASTIC INDUSTRIAL REMOTE
CONTROL VALVE. LOW FLOW OPERATING CAPABILITY
GLOBE CONFIGURATION. SIZE SHOWN ON PLAN.



ZURN 975 XL REDUCED PRESSURE PRINCIPLE
ASSEMBLY (1.5" SIZE) - INSTALLED BY LICENSED
PLUMBER PER CODE REQUIREMENTS.



INSTALL PER MANUFACTURERS RECOMMENDATIONS



RAIN BIRD WR2-RC
WIRELESS RAIN SENSOR COMBO, INCLUDES 1 RECEIVER
AND 1 RAIN SENSOR TRANSMITTER. LOCATION TO BE
APPROVED IN FIELD.



TURBINE STYLE IRRIGATION WATER METER (1.5" SIZE) -
REF. UTILITY PLAN FOR LOCATION, INSTALLED BY
LICENSED PLUMBER PER CODE REQUIREMENTS.

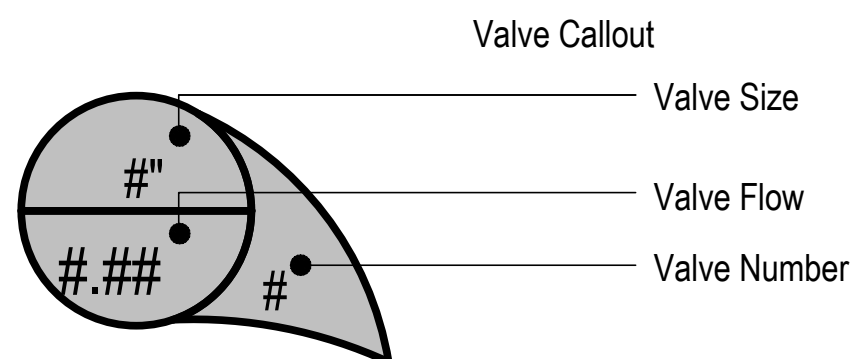


ISOLATION VALVE, MATCH SIZE OF MAINLINE

LATERAL LINES - CL 200 SDR21 SOLVENT WELD JOINTS -
SIZE AS SHOWN

MAIN LINES - SCH. 40 SOLVENT WELD 2" SIZE, UNLESS OTHERWISE NOTED. NOTE: PIPE UPSTREAM OF BACKFLOW PREVENTER, TO BE INSTALLED BY LICENSED PLUMBER PER CODE REQUIREMENTS

PIPE SLEEVE: PVC CLASS 200 SDR 21 REFER NOTES



REVISIONS

PROFESSIONAL SEAL:



ISSUE DATE

December 9, 2024

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DRAWN BY: RWR CHECKED BY: JJE

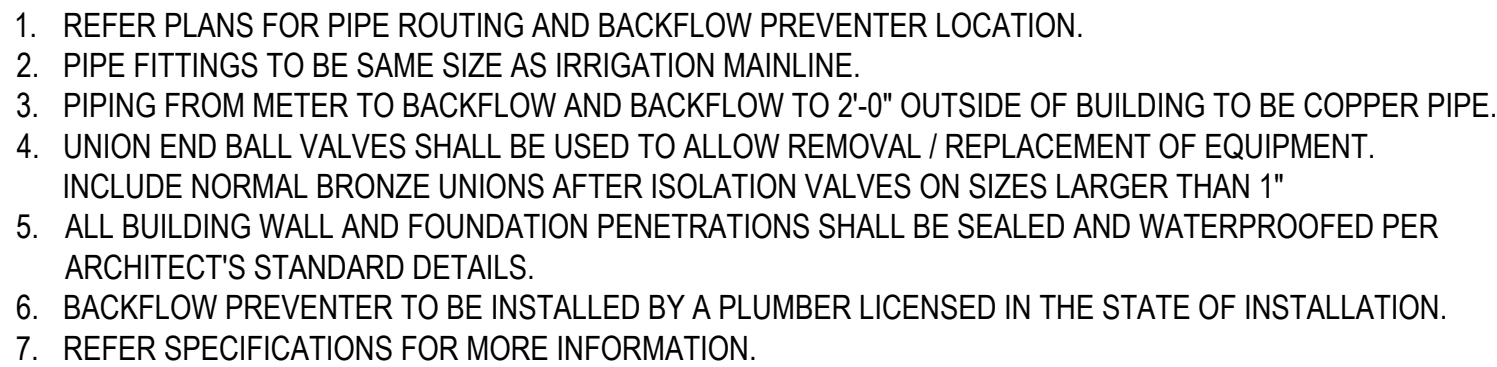
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IRRIGATION PLAN

SHEET NUMBER

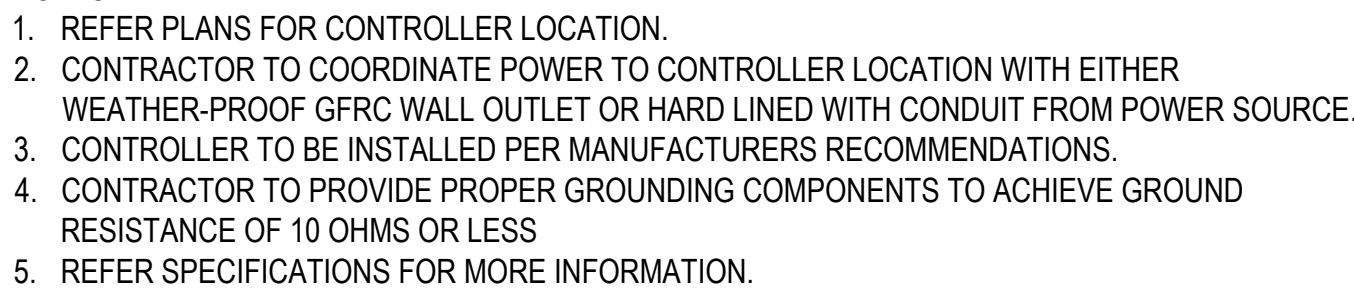
L 3.01

DRAWING IS NOT TO SCALE
UNLESS PRINTED ON SHEET
SIZE: 22"x34" (ANSI D)



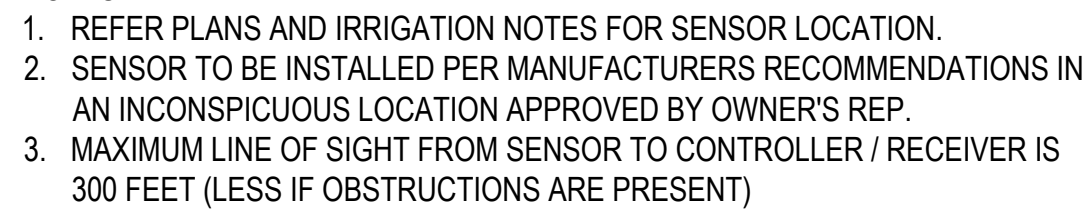
1. STRAIGHT SECTIONS OF SLEEVING TO BE SCHEDULE 40 PVC.
2. CURVED SECTIONS OF SLEEVING TO BE HDPE WITH A RATING OF 160 PSI.
3. SLEEVES SHALL BE A MINIMUM OF (2) TIMES THE DIAMETER OF THE CROSSING PIPE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
4. MINIMUM SLEEVE SIZE TO BE 2" DIAMETER.
5. CONTROL WIRES SHALL BE ROUTED IN A SEPARATE SLEEVE WITH AT LEAST 4" OF SEPARATION BETWEEN PIPE SLEEVE.

1. SPRAY BODY / NOZZLE SPACING TO BE HEAD-TO-HEAD BASED ON WATER PRECIPITATION RADIUS OF EACH NOZZLE.
2. STANDARD NOZZLE TO BE EQUAL TO (MPR) BY RAINBIRD.
3. AREAS LESS THAN 90° SHALL USE ADJUSTABLE NOZZLE EQUAL TO (VAN) BY RAINBIRD.
4. SPRAY BODIES AT LOW AREAS SHALL USE CHECK VALVE HEADS EQUAL TO SEAL-A-MATIC (SAM) BY RAINBIRD.



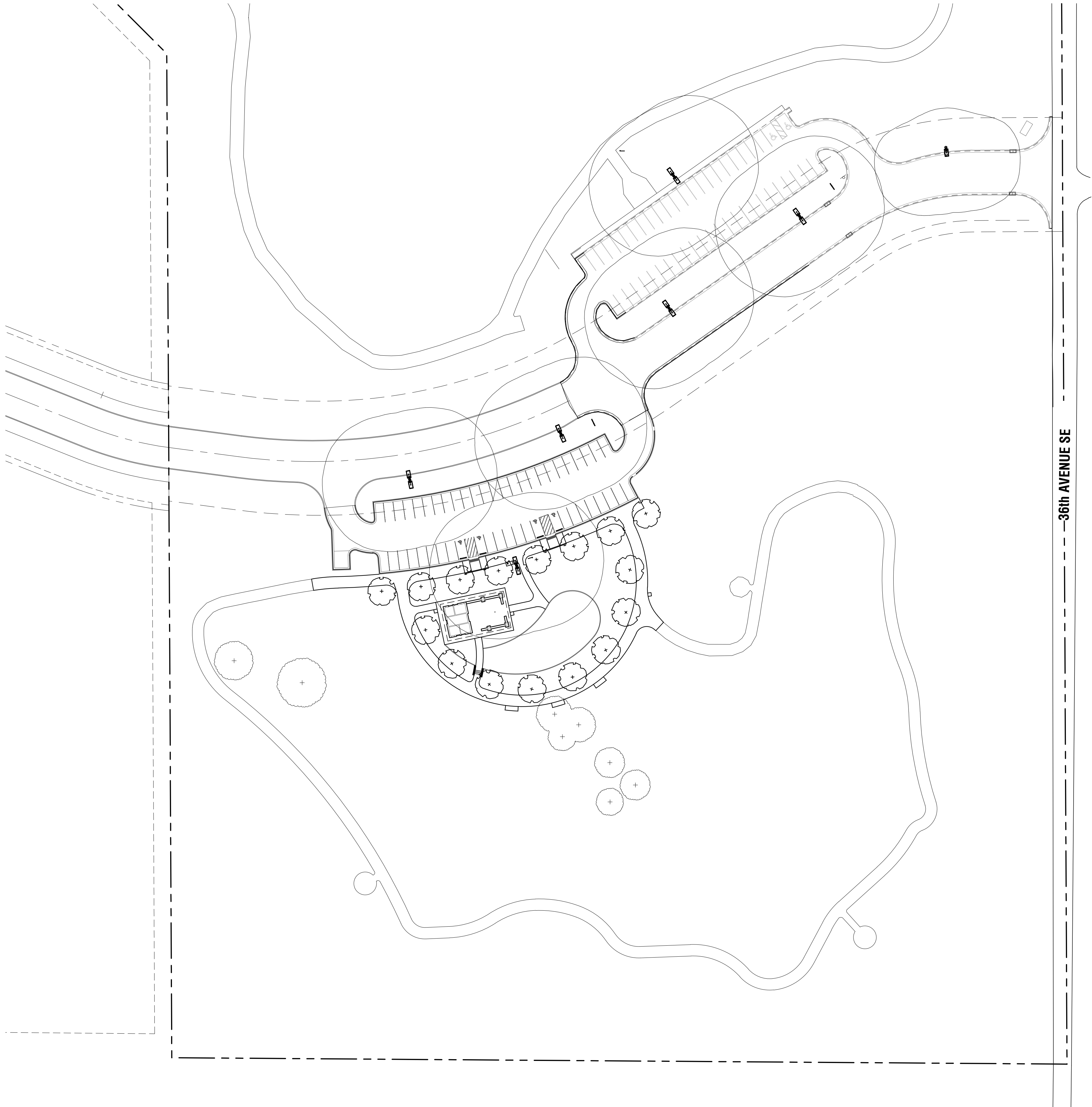
1. REFER PLANS FOR PIPING LOCATIONS.
2. REFER SPECIFICATIONS FOR MINIMUM WIRE SIZE.
3. WIRE BENDS >30° TO HAVE CORNERS BUNDLED WITH 20" MIN. LOOP OF LOOSE WIRES. UNTIE ALL LOOPS AFTER SYSTEM COMPLETION.
4. CONTROL WIRES TO BE BUNDLED AND TAPED AT 10' INTERVALS.
5. BACKFILL TO BE FREE FROM ROCKS AND DEBRIS AND BE INSTALLED IN 6" LAYERS TAMPED DOWN AFTER EACH LAYER TO REDUCE SETTLING.

1. SPRAY BODY / NOZZLE SPACING TO BE HEAD-TO-HEAD BASED ON WATER PRECIPITATION RADIUS OF EACH NOZZLE.
2. STANDARD NOZZLE TO BE EQUAL TO (MPR) BY RAINBIRD.
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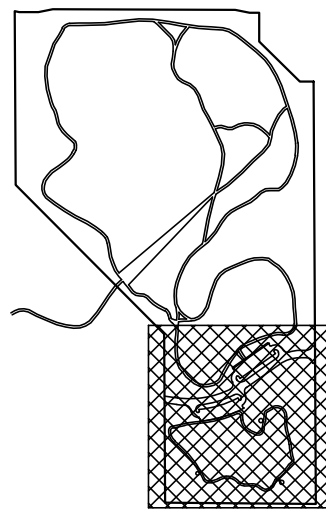


1. REFER PLANS FOR MAIN LINE ROUTING AND AREAS TO BE IRRIGATED.
2. PROVIDE ADDITIONAL (3) FEET OF WIRING IN EACH VALVE BOX FOR EASIER SERVICING
3. REFER SPECIFICATIONS FOR MORE INFORMATION.

1. VALVE TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
2. VALVE TO BE INSTALLED IN-LINE WITH MAINLINE DEPTH.
3. VALVE BOX TO BE FLUSH WITH FINISH GRADE.



1 SITE LIGHTING PLAN
1"=50'-0"

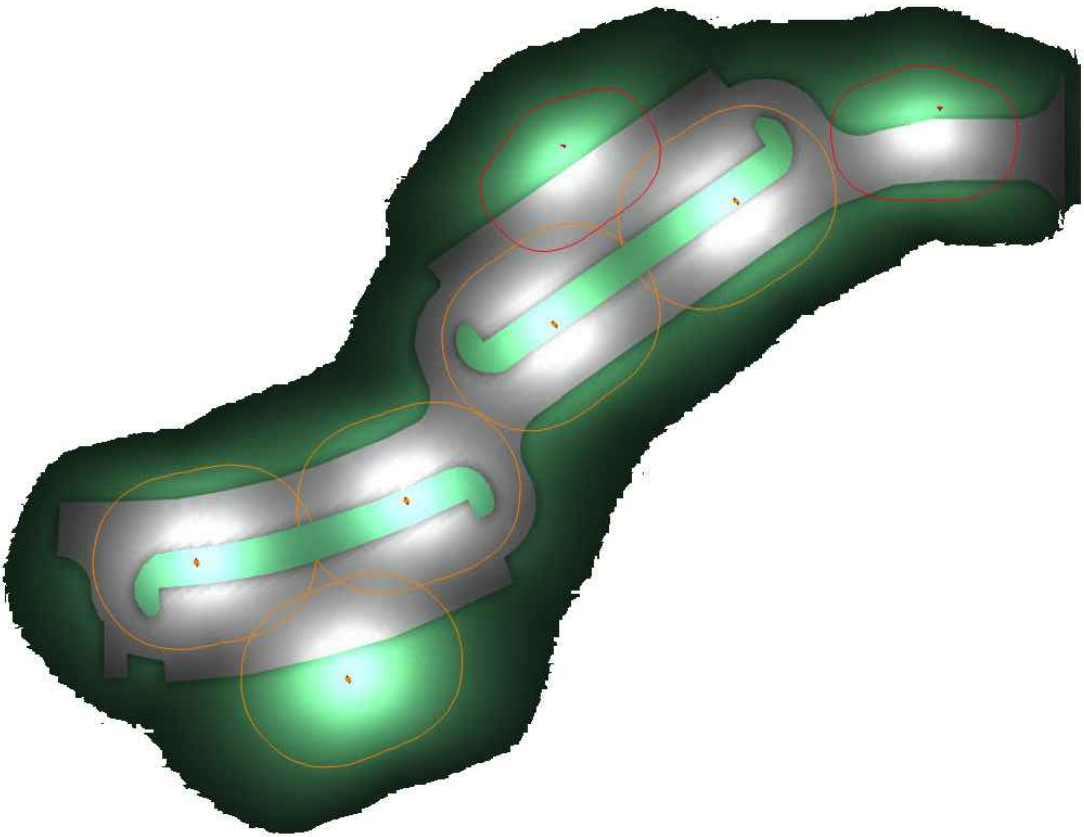


KEY PLAN

LUMINAIRE SCHEDULE								
PROJECT: SAXON PARK - SOLAR PHOTOMETRICS								
SYMBOL	QTY	LABEL	ARRANGEMENT	DESCRIPTION	LLF	LUMENS	BUG RATING	LER
	6	A2	BACK-BACK	(2) CS-COM-SSL-40W-TYPE3	1.0000	8238	B2-U0-G2	206
	1	A	SINGLE	CS-COM-SSL-40W-TYPE3	1.0000	8238	B2-U0-G2	206

PRODUCT EQUAL TO "COMMANDER SOLAR STREET LIGHT" AS MANUFACTURED BY GRIDSHIFT SOLUTIONS, LLP.
PRODUCT ATTRIBUTES:
-205 LUMEN/WATT MINIMUM-PHILIPS LUMILEDS LED
-MIN 535 WATT HOUR LITHIUM IRON PHOSPHATE BATTERY
-EPA NO GREATER THAN .85 WITH MAX FIXTURE WEIGHT OF 44LBS
-5 YEAR NON-PRORATED WARRANTY
-BATTERY RECYCLING PROGRAM
-BI-FACIAL SOLAR PANEL 18V/80WATT
-ALL IN ONE FIXTURE
WEBSITE: www.gridshiftsolutions.com/street-light-trail-parking-lot-products
LOCAL CONTACT: DREW DOZIER, EMAIL: drew@gridshiftsolutions.com, PHONE: 405-673-8684
SUBMIT PRODUCT INFORMATION, MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND PHOTOMETRICS PLAN FOR REVIEW AND APPROVAL BY OWNER'S REPRESENTATIVE. FIELD STAKE STREET LIGHT POLE LOCATIONS FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.

CALCULATION SUMMARY							
PROJECT: SAXON PARK - SOLAR PHOTOMETRICS							
LABEL	CALCTYPE	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MIN
MAIN DRIVE AREA FC	ILLUMINANCE	FC	0.98	4.2	0.0	N.A.	N.A.
NORTH PARKING LOT FC	ILLUMINANCE	FC	0.64	3.0	0.0	N.A.	N.A.
PERIMETER GRASS AREA FC	ILLUMINANCE	FC	0.0500	4.6	0.0	N.A.	N.A.
SOUTH PARKING LOT FC	ILLUMINANCE	FC	0.6600	3.7	0.1	6.60	37.00



PHOTOMETRICS PLAN

REVISIONS:

PROFESSIONAL SEAL:



ISSUE DATE:
December 9, 2024

90% CONSTRUCTION DOCUMENTS

DRAWN BY: RWR CHECKED BY: JJB
SHEET NAME:

SITE LIGHTING
PLAN

SHEET NUMBER:

L 4.01

DRAWING IS NOT TO SCALE
UNLESS PRINTED ON SHEET
SIZE: 22"x34" (ANSI D)



COMMANDER SOLAR STREET LIGHT
CS-COM-SSL-(10W-15W-20W-25W-30W-35W-40W-45W-50W-60W-80W-100W)

Features & Benefits

- All in One Design
 - Solar panel, battery & controller in one attractive luminaire
 - Low EPA
 - Less Strain on Pole
 - Lower Installation Cost
 - Easy to Convert to Solar
- Superior Technology Solutions
 - Brightest Output
 - CERTIFIED Burn Time Performance
 - Longest life
 - Smart Controller
- Smart Technology
 - Automatic Light & Time Control
 - Infrared Human Sensor (PIR)
 - Microwave Sensor
 - Web based control/monitoring available



Exclusive Free
Battery Recycling
Program

Certifications







Bifacial
Solar Module

Self Learning
Controller

LiFePO4
Lithium-Iron
Batteries

Philips Lumileds
Luxeon 5050
Chip

All-in-One

Anti-Typhoon

Optional
Motion Sensor

IP65



AMERICAN COMBAT VETERAN OWNED COMPANY

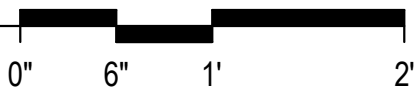
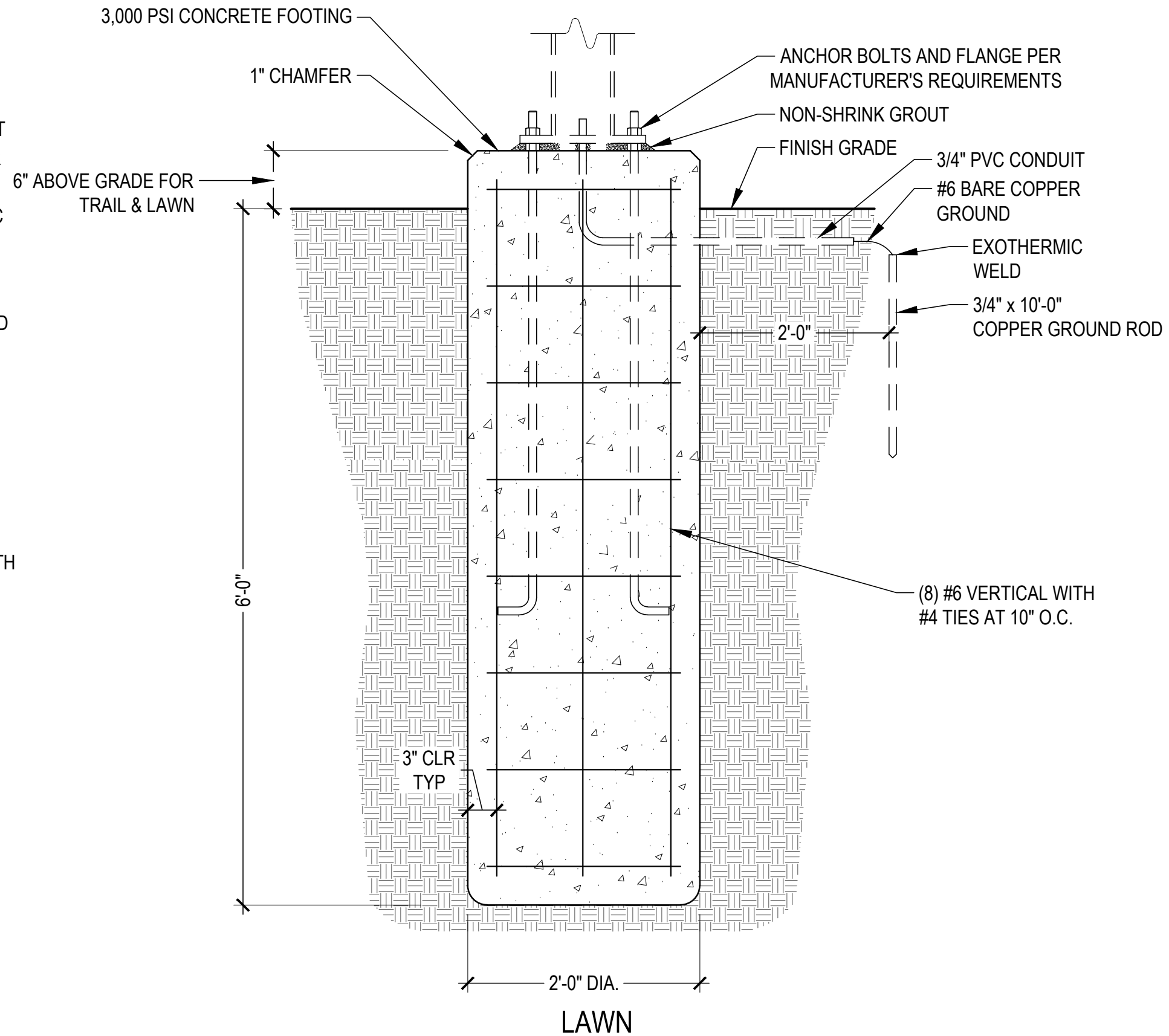
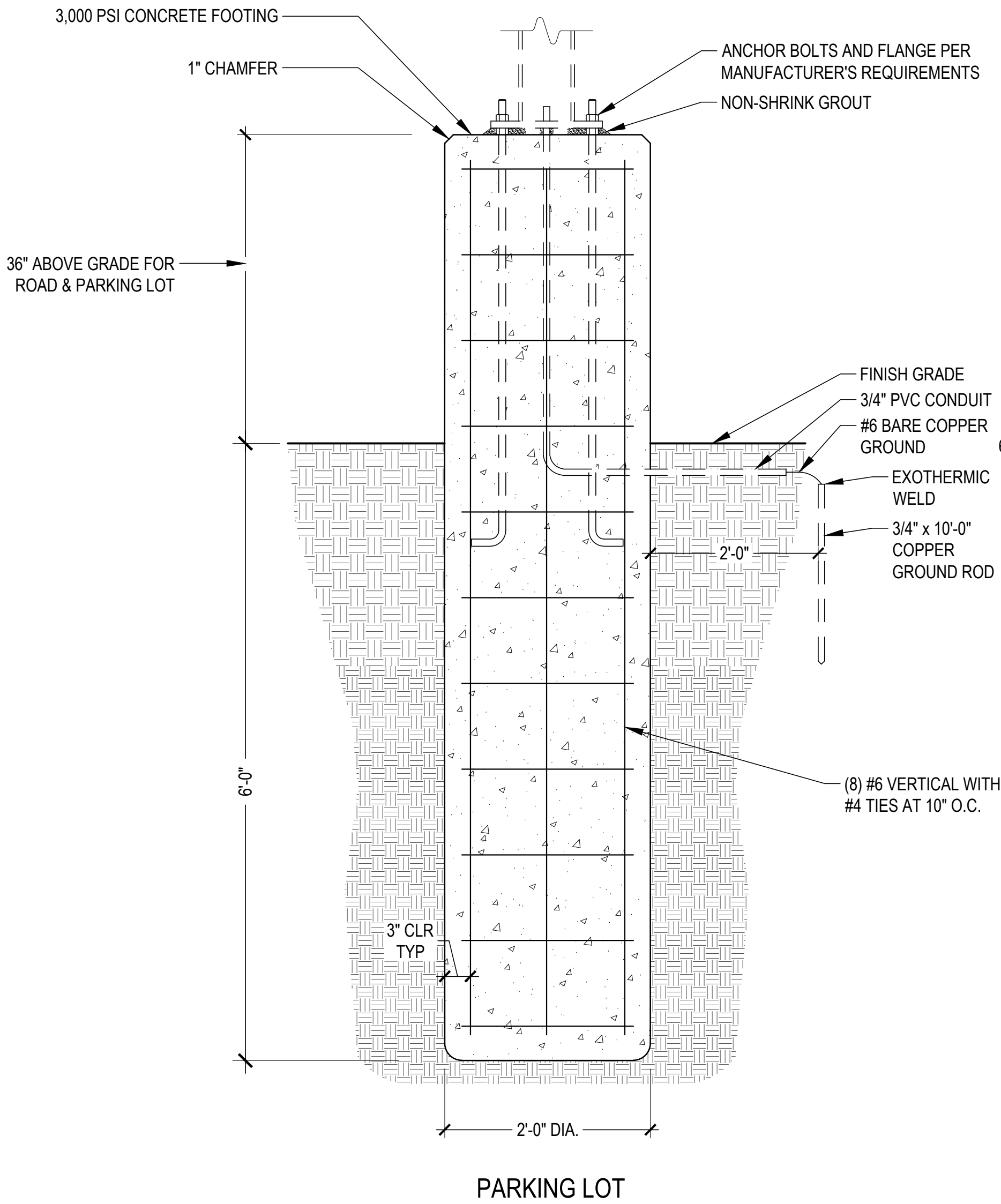
405-673-8684
www.gridshiftsolarlighting.com



Corporate: 2803 Broadway Ct., Edmond, OK 73013
California: 1341 Distribution Way, Suite 20, Vista, CA 92081
Cuesta Sol is a trademark of Gridshift Solutions, LLP.



Residential • Parking Lots • Sports & Playgrounds • Pathways • Parks • Security •



1 LIGHT POLE FIXTURE - COMMANDER SOLAR STREET LIGHT
NOT TO SCALE

2 LIGHT POLE BASE
1" = 1' - 0"



General Requirements for Signage Fabrication and Installation

1. Designer’s signage construction / tender documents are for design intent only. No instructions for structural appropriateness have been made. It is the responsibility of the fabricator to provide engineered, stamped shop drawings for signage and to ensure that all elements are fabricated for a stable and durable installation while adhering to the aesthetic details indicated. See Qualifiers section of this page for additional information.

2. The Signage Contractor shall conform to these drawings and specifications and submit to the Graphic Designer samples for all finishes included in their scope of work before commencement of such work.

3. For the purpose of bidding process, proprietary names identifying items of work are used solely to describe the standard of the product or the color of the finish, unless the items of work are explicitly noted as not having an equal. Signage Contractor shall secure approval of any substitutions from the Graphic Designer. Any items approved for substitution should be submitted to the Graphic Designer for final approval.

4. All dimensions of existing work and all dimensions required for the Signage Contractor shall verify work that is connected with work in place. In addition, the Signage Contractor shall verify all finishes and notify the Graphic Designer of any discrepancies before performing any work.

5. The Signage Contractor shall notify the Signage Designer of any discrepancies in the signage construction / tender documents immediately and shall not proceed or allow sub-fabricators to work in those areas until said discrepancies are resolved.

6. When changes are required, for any reason, notify the Signage Designer before performing any work. Changes which alter the contract documents must have the approval of the Designer and Owner before commencement of such work. Changes that modify the contract amount must have the approval of the Signage Designer and Owner before commencement of such work.

7. Sign Contractor is to maintain proportions of all elements shown in design drawings. Any changes in proportions due to structural, lighting, or other requirements shall be brought to the attention of the Graphic Designer.

8. All work shall be done in accordance with all applicable codes and to the highest standards of trade practice.

9. Prior to commencing any work, the Signage Contractor who is awarded all or part of fabrication and/or installation shall review with the Owner and the Signage Designer, the phasing of their work and secure approval of all parties. Submit to the Owner and the Designer a master schedule of the awarded work one (1) week after the contract signing.

10. Documents should be priced as designed for accurate bid comparison, however Sign Contractor may separately indicate any VE options or recommendations for the Owner and Signage Designer to consider.

11. The Sign Contractor shall furnish labor, materials, equipment and services necessary and reasonably incidental to complete fabrication, installation and delivery of all signs as described on the following pages.

12. The Sign Contractor shall be responsible for a complete and thorough job. Materials not specifically described but required for a complete and proper installation shall be described and provided for by the Sign Contractor.

13. The Sign Contractor shall be responsible for the quality of all materials and workmanship of any firms or individuals who act as his Subcontractors.

14. The Sign Contractor shall be responsible for providing anyone working on their behalf with complete and up-to-date drawings, specifications, sign schedules and information issued for this project.

15. The Sign Contractor shall be responsible for coordinating all their work with other trades.

16. The Signage Contractor shall warrant that all merchandise is free of defects in material or workmanship and shall provide Owner with a warranty to replace or repair any merchandise that fails to conform to above for a period of no less than one (1) year from date of final acceptance. Longer warranties for individual components (lighting, etc.) shall also be provided to the Owner if requested.

17. The Signage Contractor shall coordinate anticipated in-wall requirements such as blocking and electrical with the General Contractor and should be confirmed upon award of project.

18. All hangers, channels, rods and other misc. support steel shall be installed by the Signage Contractor as necessary for the support of suspended equipment (signage) and shall be fastened to the existing structure in such a manner as to not compromise its existing structural integrity or fire rating.

19. The Signage Contractor will be required to have structural elements of signs stamped by an engineer licensed as required within the State of the completed work. Standard and approved methods of fabrication will be required by the Signage Designer.

20. It shall be the responsibility of the Signage Contractor to identify in their bid all items or issues which are *not included* and may require additional expense to the owner not specifically described in these bid documents including but not limited to the following:
- Electrical power requirements
 - Structural backing or other reinforcements
 - Data, Low Voltage cable
 - Soils or sub-grade reports and information
 - Zoning, Variance or other Code related requirements
 - Any work required to be subcontracted, such as demo of existing signage, sire preparation, concrete work, masonry, etc.

Unless otherwise noted, the expectation is that this is a turn-key project.

21. It shall be the responsibility of the Sign Contractor to obtain any entitlements or other variances required by any governing regulatory agencies and to obtain any permits for construction and installation of the work. All costs for entitlements or variances shall be identified in the bid as a separate line item.

22. (If provided) The message schedule does not reflect the actual layout of the sign. The design drawings give layout direction, as well as direction regarding signs utilizing pictograms. Sign Contractor is to provide Signage Designer with all required layouts for review/approval before proceeding with fabrication.

23. (If provided) Location plans are for reference only. Unless specific, dimensioned elevations are provided, the exact placement of signs will be determined during a pre-installation walk-thru with Sign Contractor and Signage Designer and or owner, or on an individual basis as needed.

24. The Signage Contractor shall field verify all conditions and measurements prior to commencement of work. Fabricator to review the structural, mechanical, and architectural drawings or site conditions to verify sizes and locations of signage related elements that are to be provided by the General Contractor. Any discrepancies and/or conflicts shall be reported to the Owner’s representative in writing before proceeding with fabrication or ordering of materials.

25. Plastic joints and seams are to be prepared properly to insure accurate fit. Seams are to be capillary cemented using a two-part polymerized cement. Refer to plastic and/or cement manufacturer for recommendations about specific project criteria. Seams are to be transparent, with no gaps, air bubbles, etc.

26. Translucent panel expansion joints or floating seams in acrylic or polycarbonate sign faces are to be fully described in shop drawings. All panel surfaces are to be even, smooth, finished surfaces with paint color or digital media fitted exactly to conform with face and edges. Provide samples of any seams or joints for approval.

27. Trim cap or other face retainer devices shall conform to the scale and sizes indicated on the drawings and shall be fully described in the vendor shop drawings. Include sizes, colors and method of attachment. All seams are to be even, smooth and on the same surface plane. Liquid sealant or other fillers shall not be applied to the face of retainers. Provide samples of any seams or joints for approval.

Qualifiers

The Signage Contractor shall supplement the general design shown with detailed shop drawings for the Signage Designer and Owners approval. The shop drawings shall include major aspects of the system proposed, such as section details, shapes, and connections of components and joints, how temperature movement is handled, venting, and anchorage to structure, and layouts. Shop drawings shall be submitted for review by Owner, General Contractor, Signage Designer, and any other stakeholders or contractors whose work is directly or indirectly impacted by the signage.

Shop drawings must include locations of all seams, joints or other points of connection, including locations and types of mechanical fasteners and method of sealing (if applicable). Samples of these seams shall be submitted for approval.

All ideas, design arrangements, or plans indicated or represented by these drawings are owned by, and remain the sole property of the Signage Designer. No ideas, designs, arrangements, or plans shall be disclosed to any other person, firm, or corporation for any purpose whatsoever without the express written consent of the Signage Designer.

DIN ALTERNATE BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

BREE REGULAR

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

2 PROPOSED PROJECT FONTS
NTS



4 (G01) TRAIL MARKERS
Scale 1/2" = 1' - 0"



5 (G03) AMENITY IDENTIFICATION SIGN
Scale 1/2" = 1' - 0"

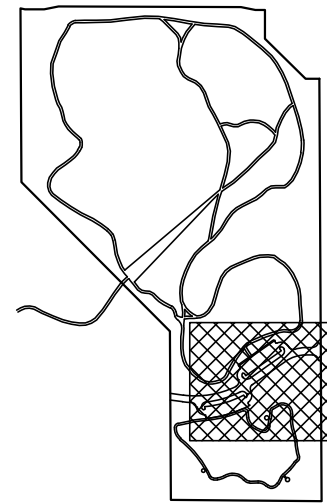
3 (G02) PARK MAP
Scale 1/2" = 1' - 0"



COLOR / PAINT SPECS (TBD)



5 Project Logo Reference
NTS



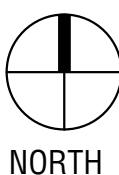
KEY PLAN

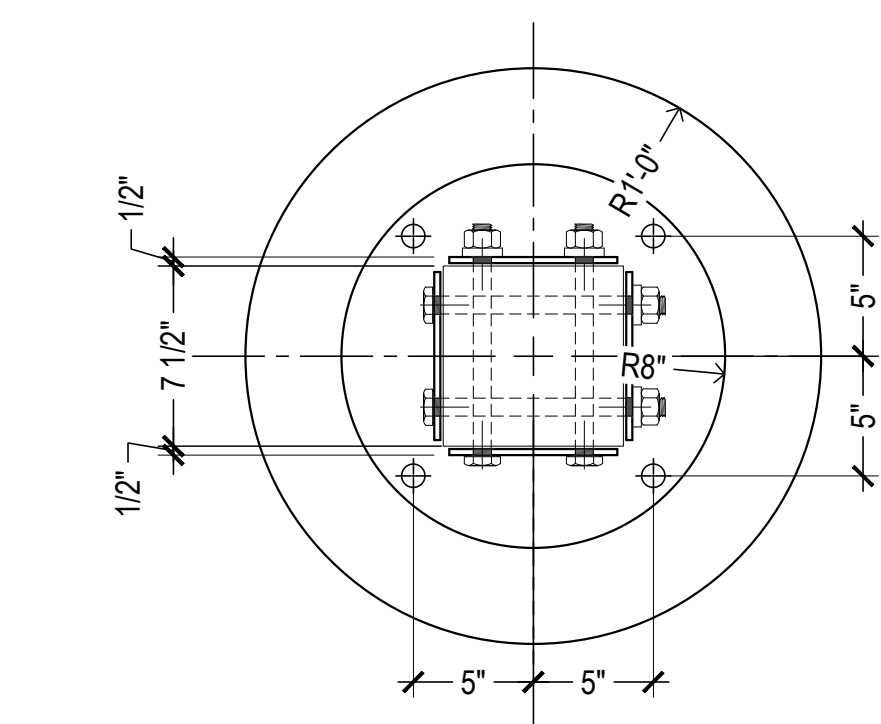
KEYNOTES - GRAPHIC DESIGN PLAN

G01	TRAIL MARKERS, REF DETAILS 3/G1.01 AND 1/G1.02 (10 TOTAL), LOCATIONS TBD / NOT SHOWN ON PLAN
G02	PARK MAP, REF DETAILS 2/G1.01 AND 2/G1.02 (3 TOTAL)
G03	AMENITY IDENTIFICATION SIGN, REF DETAILS 4/G1.01, 1/G1.03, AND 1/G1.04
G04	PARK ENTRY MONUMENT SIGN, BY OTHERS (NOT IN CONTRACT)

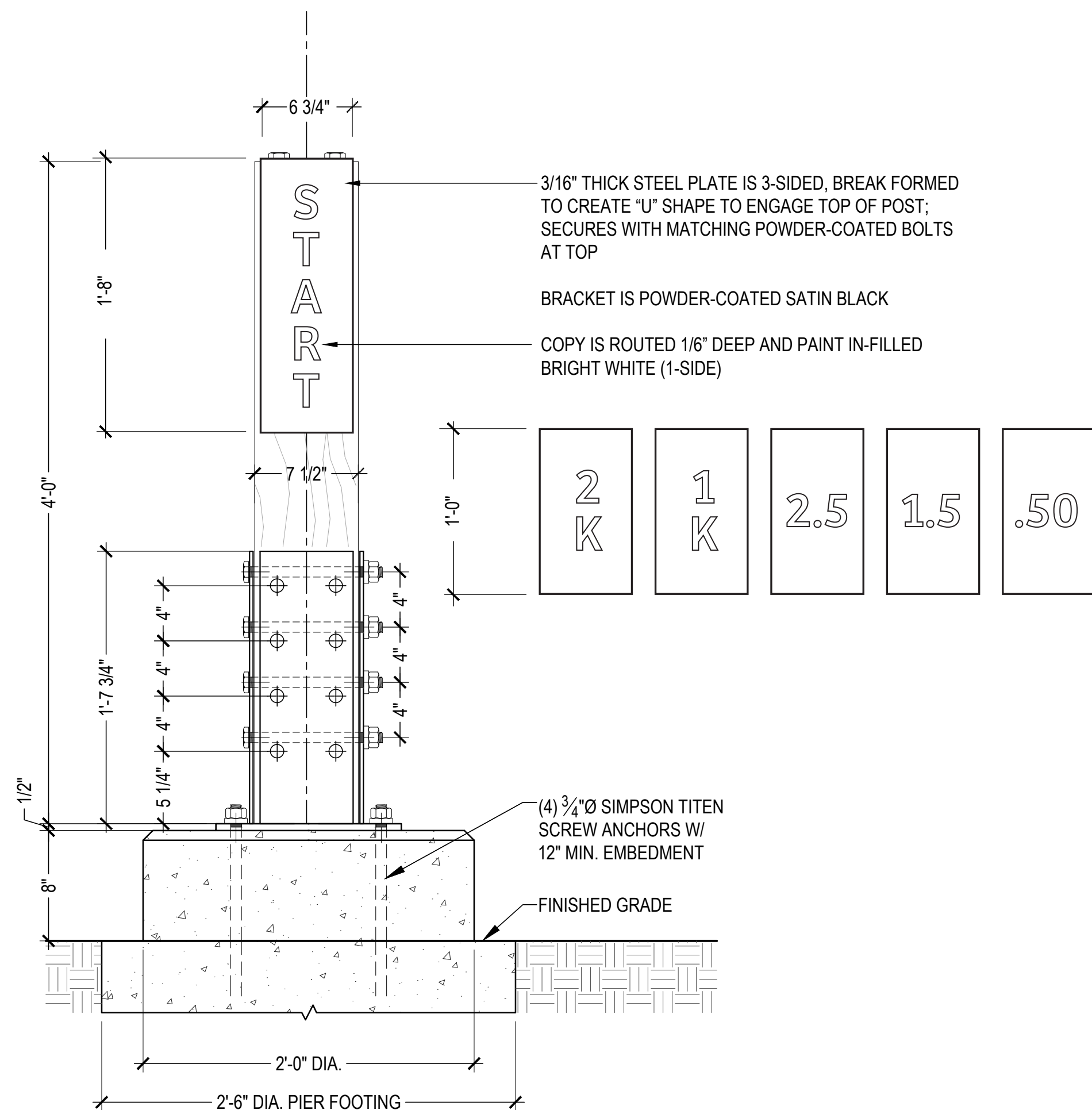
1 GRAPHIC DESIGN KEY PLAN
1"=150'-0"

0' 75' 150' 300'





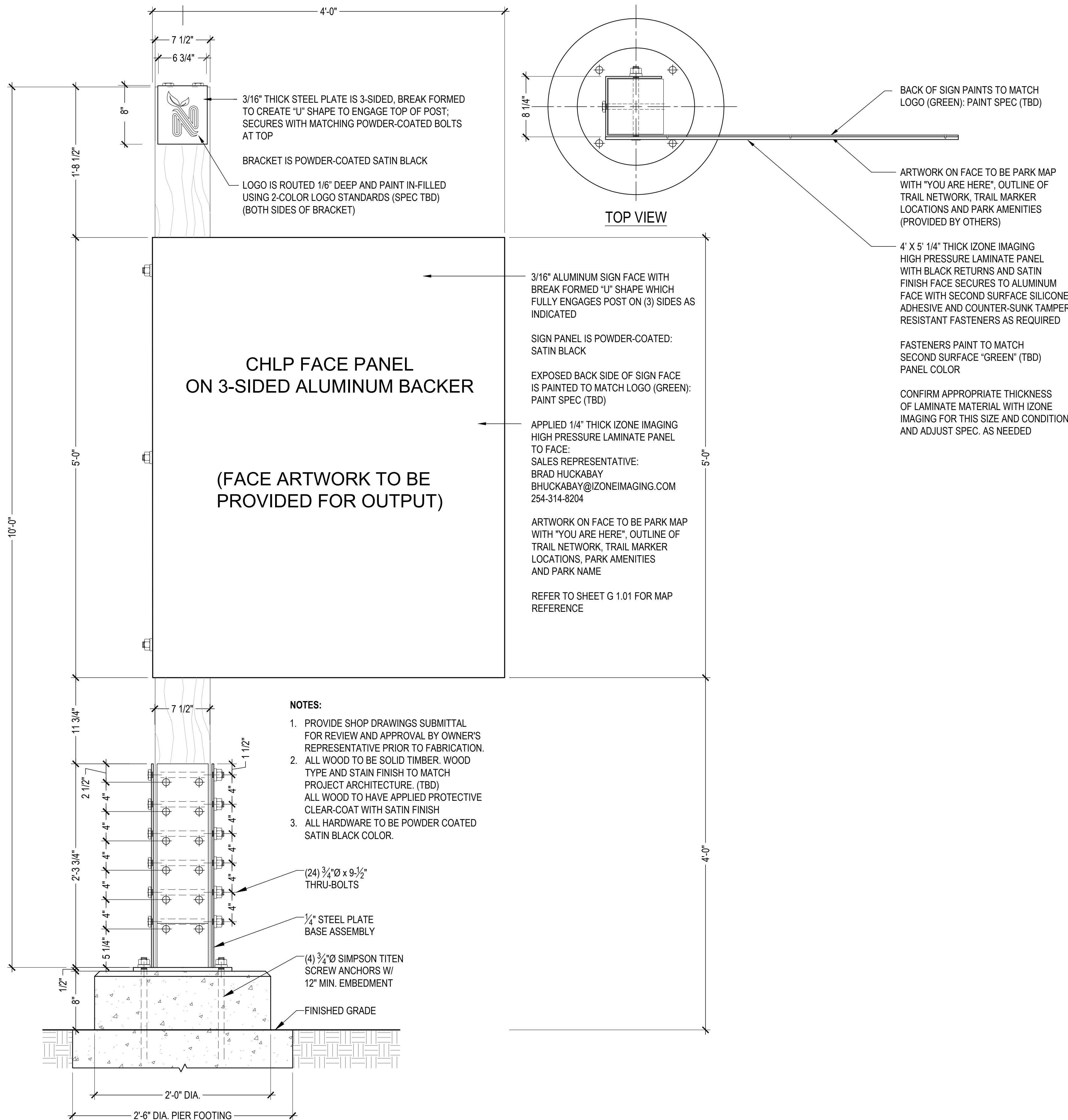
PLAN VIEW



ELEVATION VIEW

1

TRAIL MARKER FRAMING & BASE

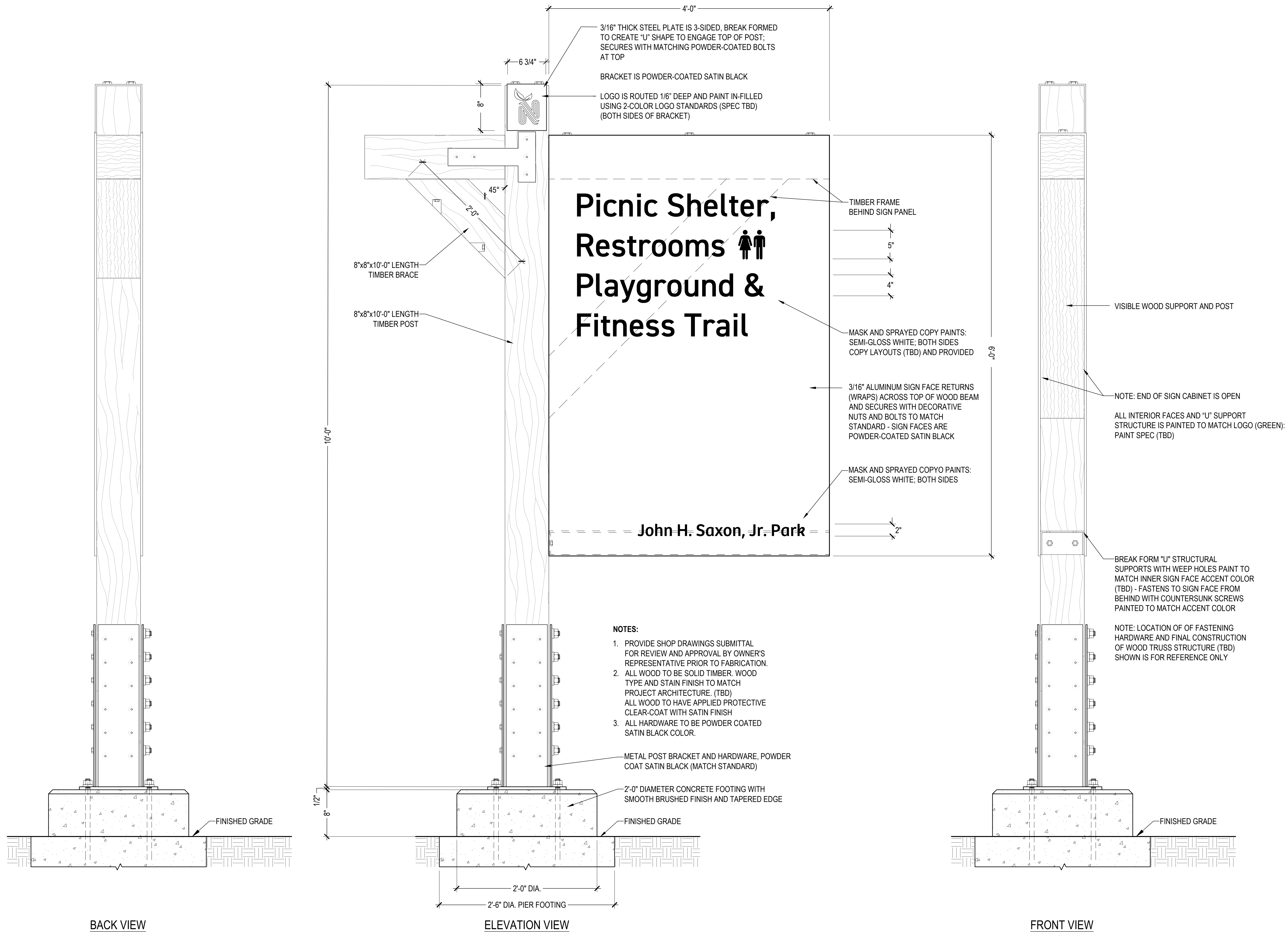
$$1-1/2''=1'-0''$$


ELEVATION VIEW

2

PARK MAP FRAMING & BASE

$$1-1/2''=1'-0''$$

1 IDENTIFICATION SIGN ELEVATIONS
1-1/2"=1'-0"



REVISIONS:

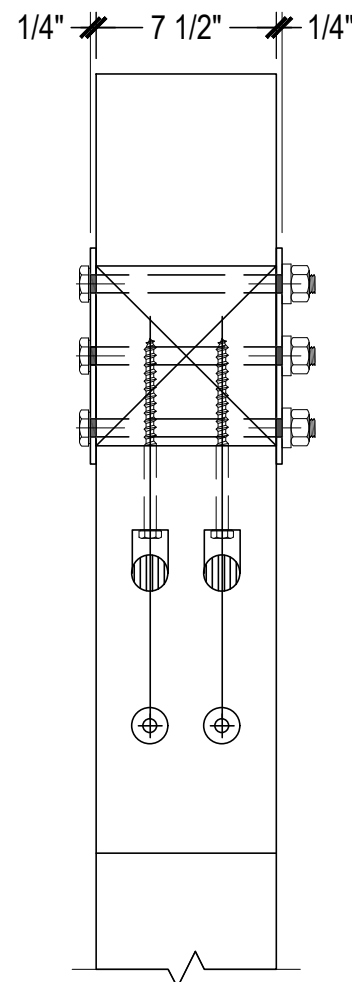
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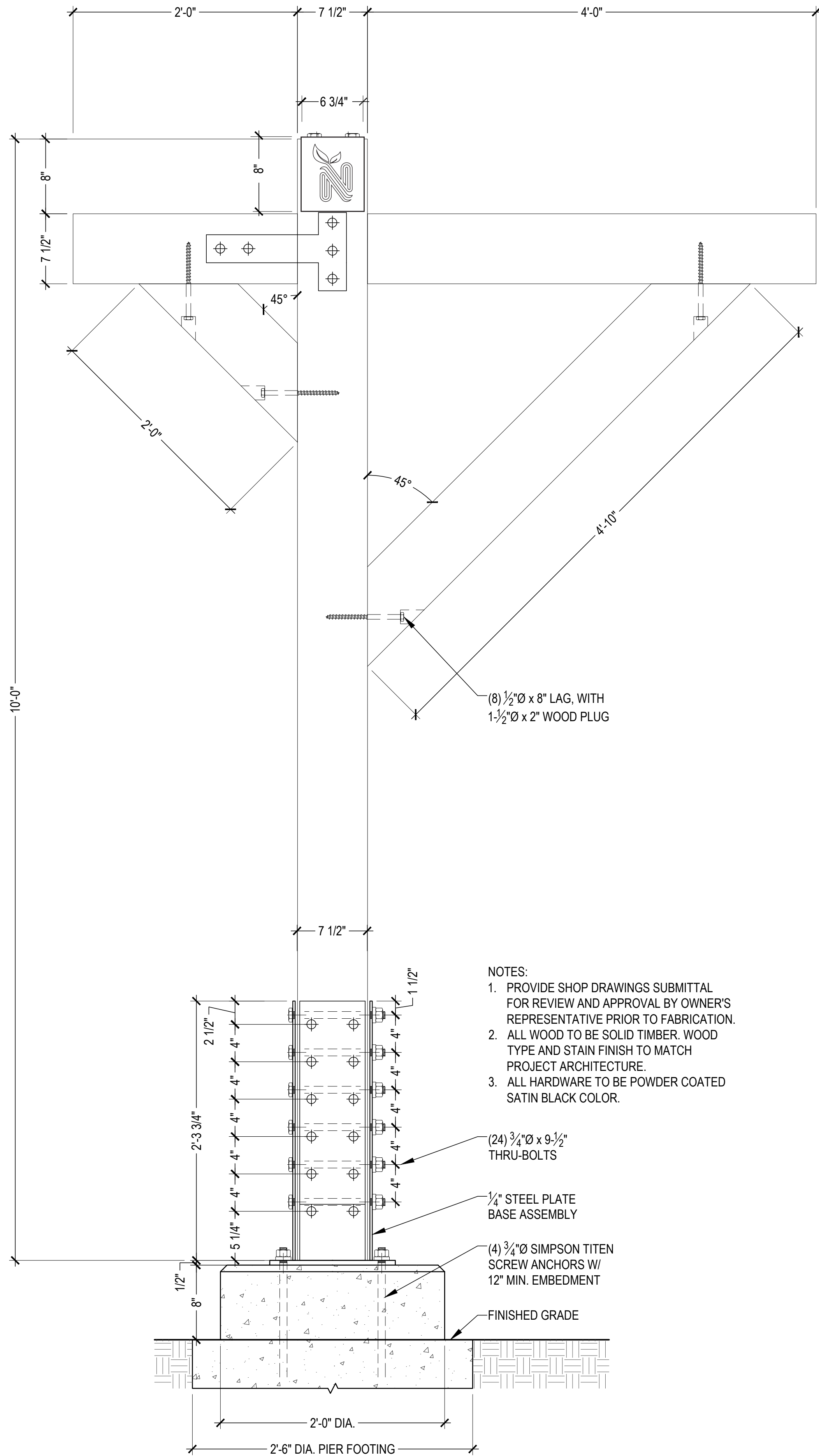
ISSUE DATE:
December 9, 2024

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SHEET NAME:

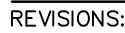
GRAPHIC DESIGN
SIGN DETAILS
SHEET NUMBER:



SIDE PLATE
FRONT VIEW



ELEVATION VIEW



SCALE: 3" = 1'-0"

SCALE: 3" = 1'-0"





PLAN NOTES BY SYMBOL 'Ⓢ'

- 1 ACCESSIBLE WATER CLOSET, REFER TO PLUMBING
- 2 LAVATORY, REFER TO PLUMBING
- 3 CONCRETE ADULT CHANGING BENCH
- 4 ACCESSIBLE DRINKING FOUNTAIN WITH HIGH AND LOW AND WATER BOTTLE FILLER, RE: PLUMB
- 5 HOSE BIB
- 6 WALL MOUNTED HEATER
- 7 ELECTRIC METER
- 8 ROOM SIGNAGE
- 9 RECESSED HOSE BIB WITH KEY

GENERAL NOTES

1. ALL CONSTRUCTION TO CONFORM TO ALL APPLICABLE BUILDING CODES - LATEST ADOPTED EDITIONS
2. ANY DISCREPANCIES BETWEEN DRAWINGS AND / OR SPECIFICATIONS AND EXISTING CONDITIONS SHALL BE REFERRED TO ARCHITECT FOR CLARIFICATION AND ADJUSTMENT DURING BIDDING OR BEFORE WORK COMMENCES.
3. INSTALL ALL PRODUCTS AND ASSEMBLIES IN STRICT ACCORDANCE WITH MANUFACTURERS' SPECIFICATIONS AND INSTRUCTIONS.
4. HCAP TOILETS TO COMPLY WITH CABO ANSI A 117.1 - LATEST ADOPTED VERSION.
5. CAULK ALL JOINTS OR CRACKS WHICH OCCUR WHERE DISSIMILAR MATERIALS INTERSECT PERPENDICULAR TO EA. OTHER, AND THE INTERSECTION IS EXPOSED TO VIEW, U.O.N.
6. INSTALLATION DETAILS AND DIMENSIONS MAY DIFFER FROM THOSE SHOWN. CONTRACTOR SHALL VERIFY INSTALLATION REQUIREMENT FOR ALL PRODUCTS TO BE INCORPORATED IN THE WORK (INCLUDING PARTITION THICKNESS FOR RECESSED PRODUCTS). Ⓢ IS RESPONSIBLE FOR ACCOMMODATING ANY CHANGES TO OTHER MATERIALS OR PRODUCTS THAT ARE NECESSARY BECAUSE OF THESE DIFFERENCES.

CEILING

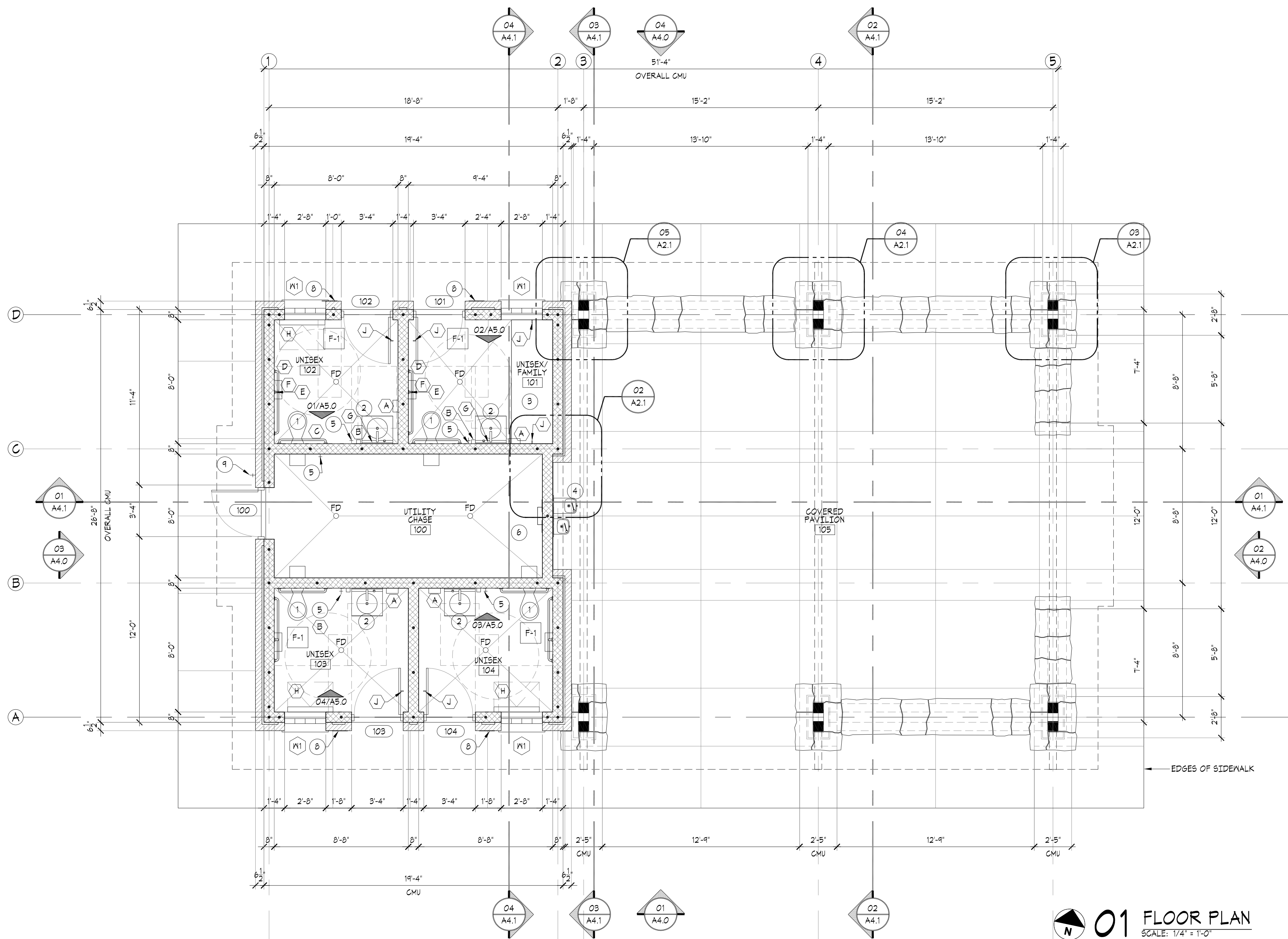
- ALL CEILING PLANES TO BE UNIFORM AND SMOOTH.

PAINTING

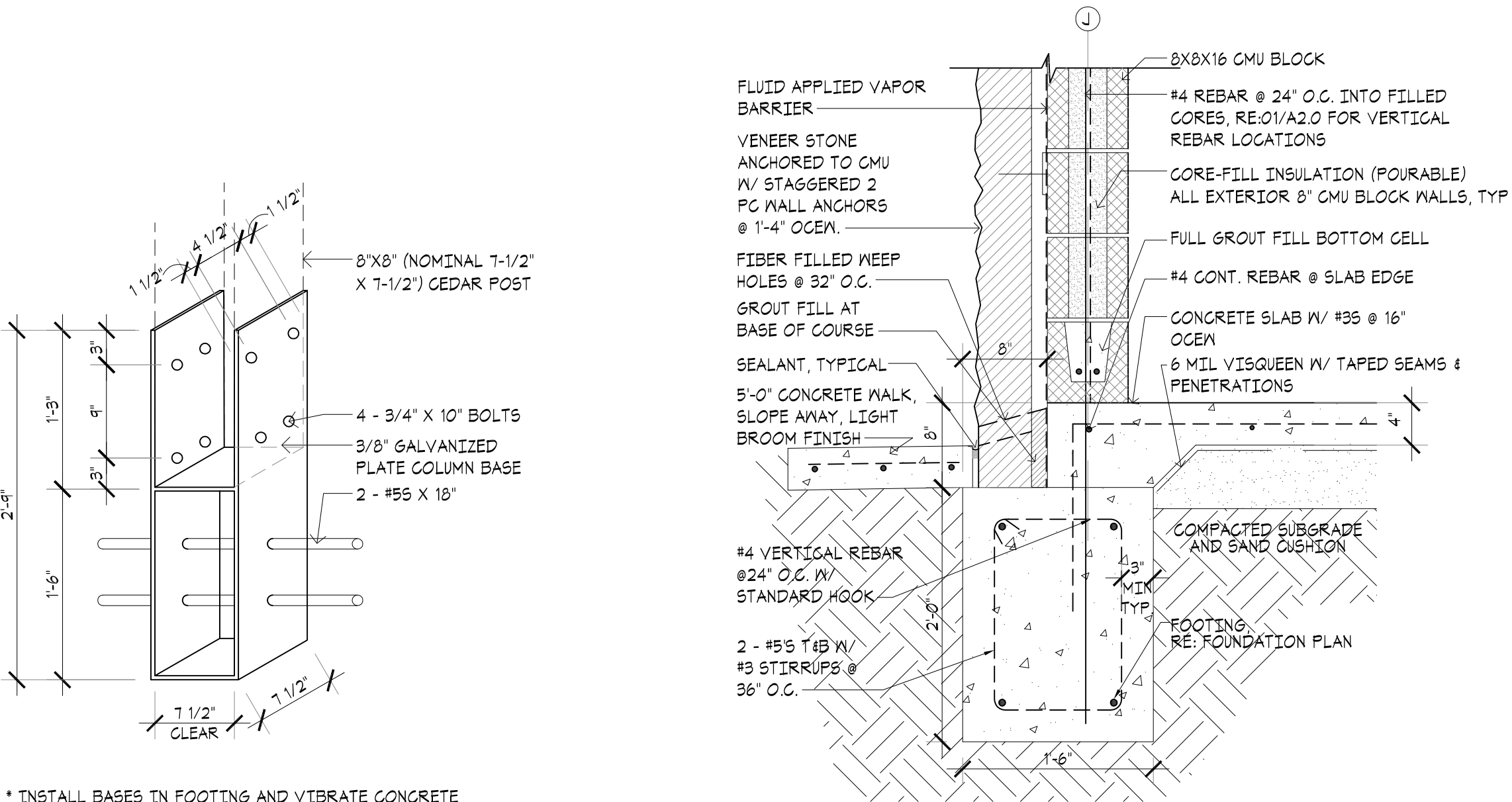
- ALL SHEENS TO MATCH ON ALL COMMON WALL PLANES.
- SEMI-GLOSS PAINT FINISH ON ALL CEILINGSS, REFER SPECIFICATIONS.
- CONTRACTOR TO PROVIDE MOCK UP OF ALL PAINTS AND SHEENS REQUESTED.
- ALL H.M. FRAMES AND DOORS PAINTED TO MATCH ADJACENT WALL COLOR W/ SEMI-GLOSS ALKYD ENAMEL FINISH.
- ALL DIFFUSERS AND LOUVERS TO BE SHOP PAINTED TO MATCH ADJACENT FINISH W/ SEMI-GLOSS FINISH. COLOR TO BE APPROVED BY OWNER/ARCHITECT. SUBMIT STANDARD FINISHES FOR SELECTION.
- RESTROOM WALLS: BLOCK FILLER W/ MINIMUM TWO COATS OF SATIN EPOXY PAINT FINISH. REFER SPECIFICATIONS.
- UTILITY CHASE WALLS: BLOCK FILL AND MASONRY PAINT
- PAINT COLORS BY ARCHITECT.

HARDWARE

- ALL DOOR HARDWARE TO BE HEAVY DUTY STAINLESS STEEL AND MOUNTED PER MFG. INSTRUCTIONS AND ALL LAYOUT PENCIL MARKS TO BE REMOVED FROM DOOR AND HARDWARE
- IT IS THE INTENT OF THE DESIGN TO HAVE FOR ALL FASTENERS AND CONNECTORS TO BE CONCEALED FROM VIEW AS MUCH AS POSSIBLE.

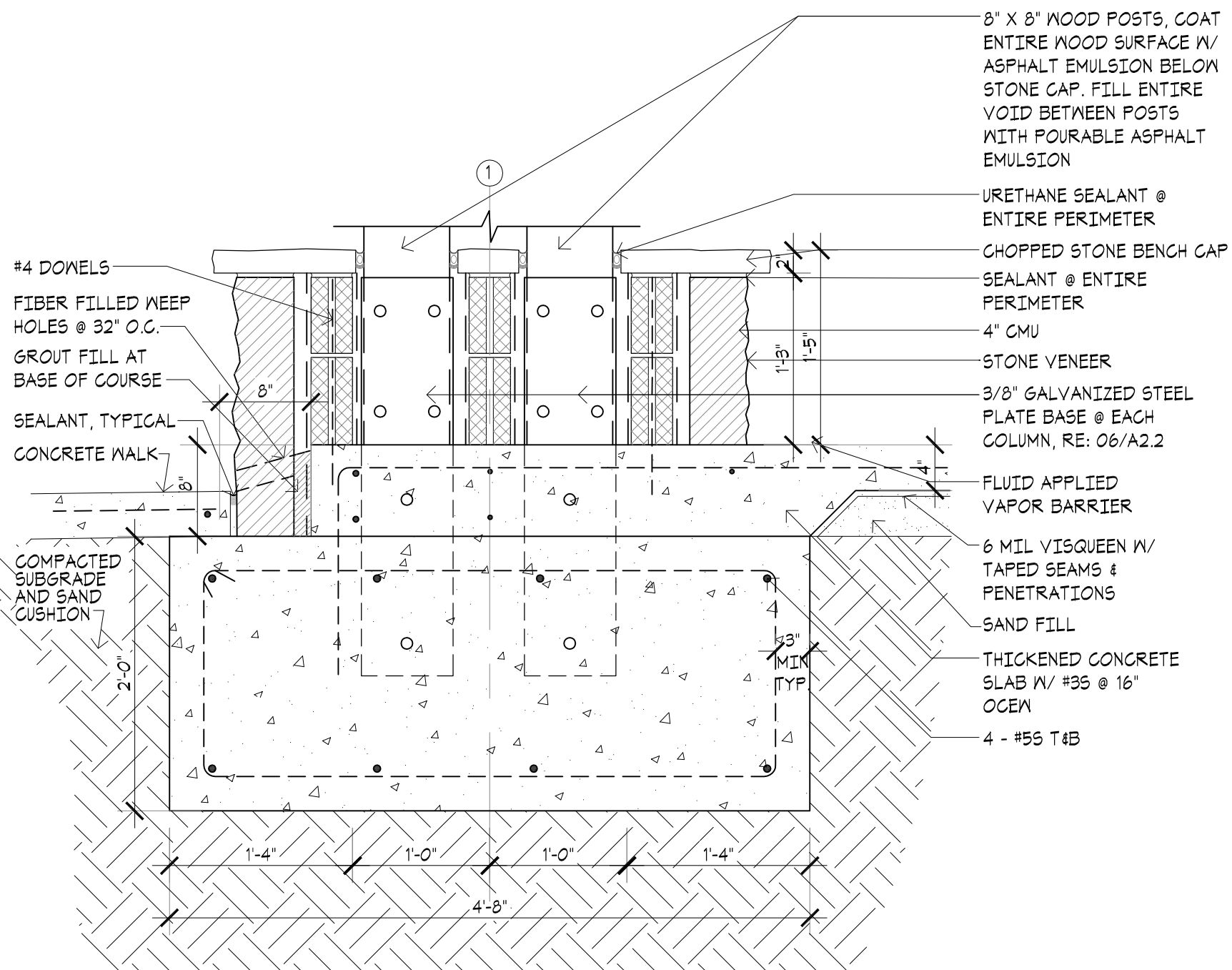
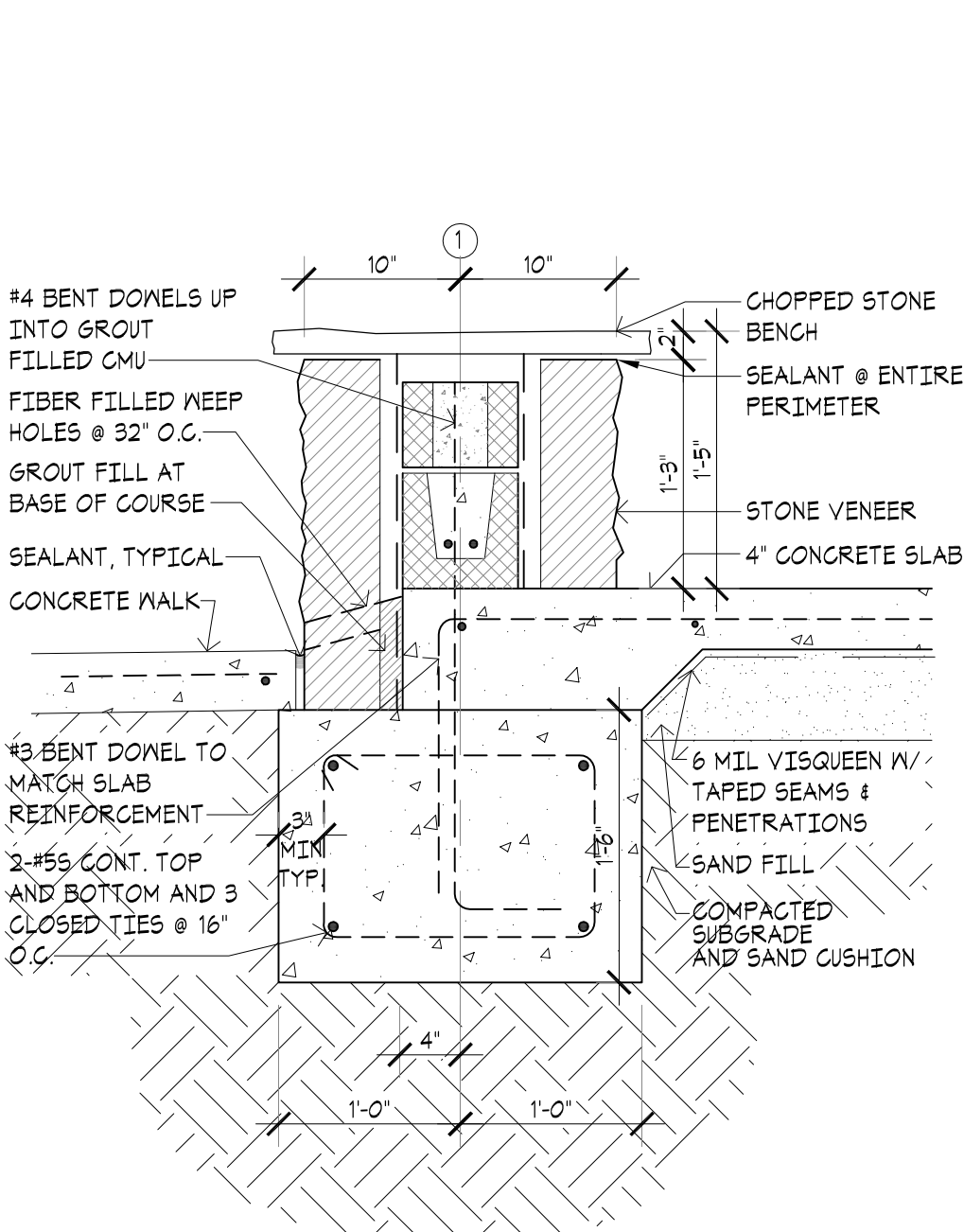
**01 FLOOR PLAN**
SCALE: 1/4" = 1'-0"



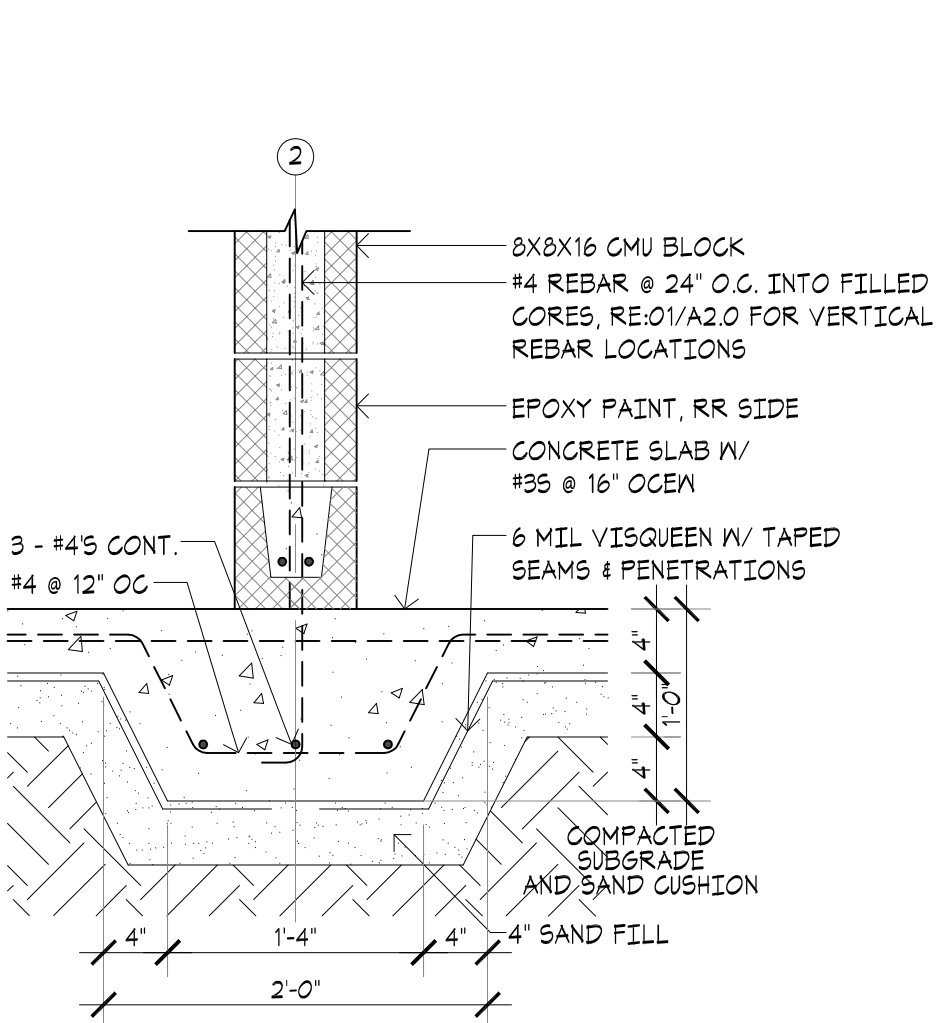


* INSTALL BASES IN FOOTING AND VIBRATE CONCRETE COMPLETELY AROUND EACH BASE.

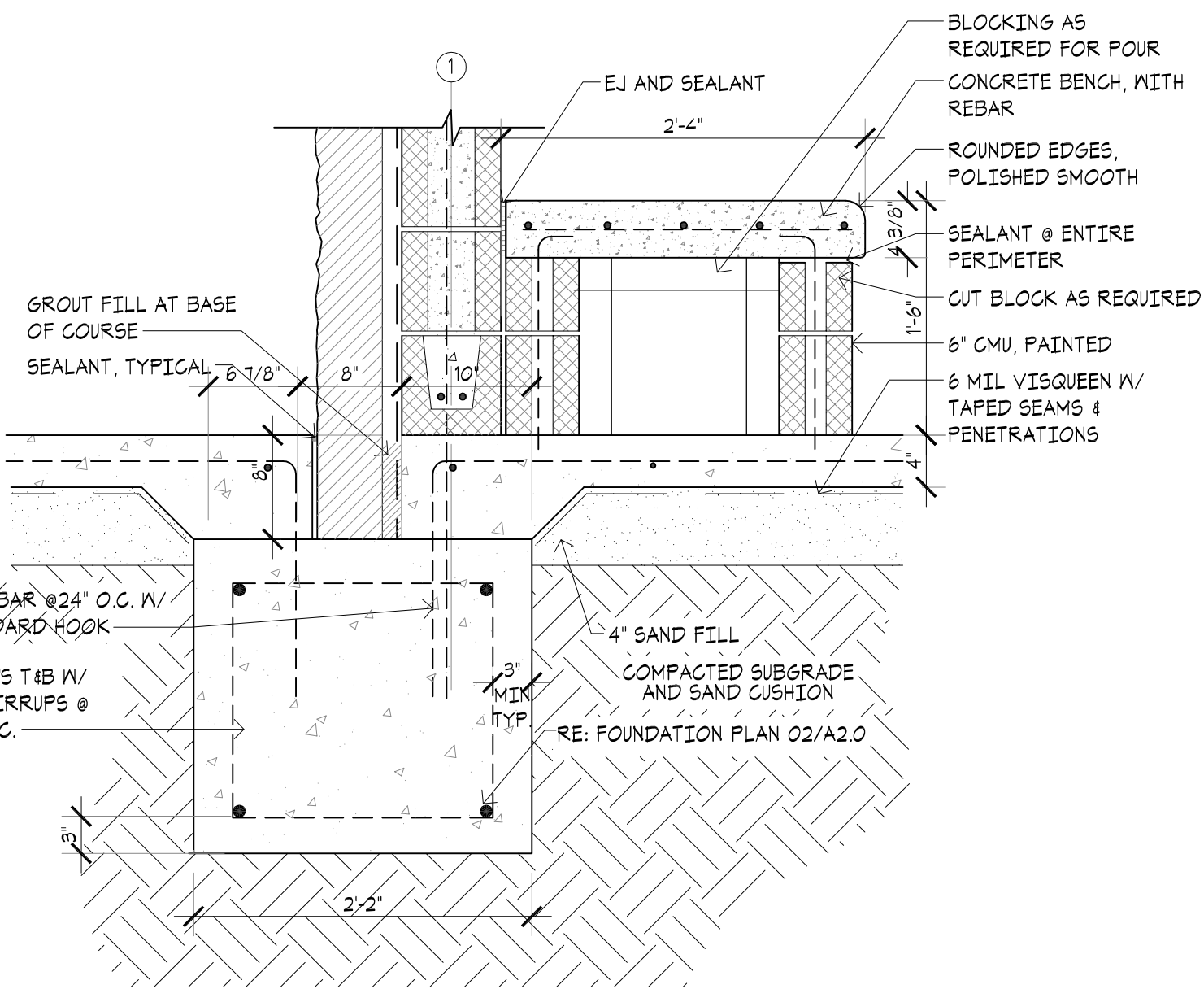
06 SHELTER COLUMN BASE (12 EACH)
SCALE: 1/4" = 1'-0"



02 DETAIL AT DOUBLE COLUMN
SCALE: 1" = 1'-0"



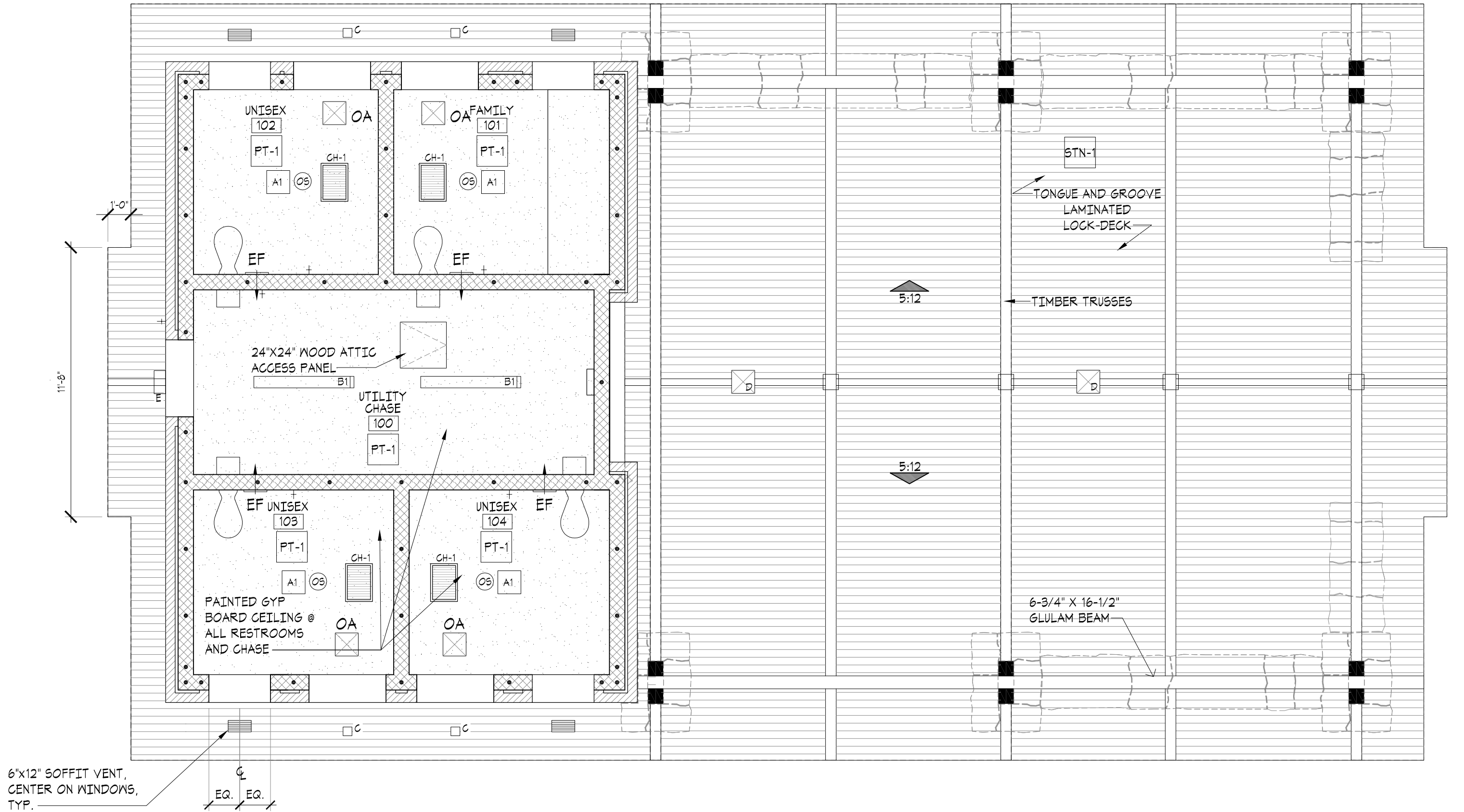
04 THICKENED SLAB DETAIL
SCALE: 1" = 1'-0"



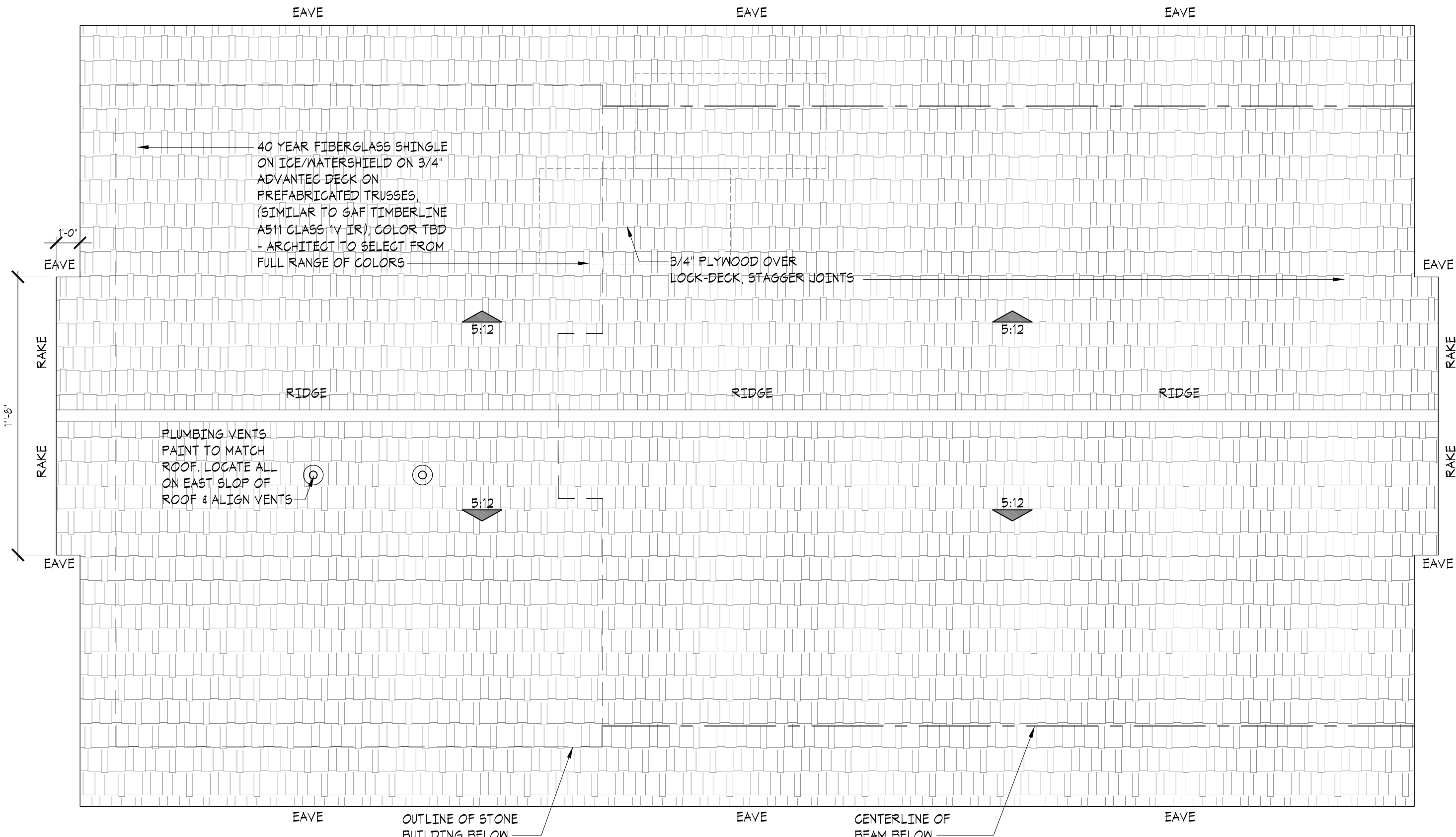
01 BENCH/ CHANGING TABLE DETAIL
SCALE: 1" = 1'-0"

REFLECTED CEILING PLAN LEGEND:		
MARK	SYMBOL	DESCRIPTION
A		RECESSED LED 12'X12' LIGHT FIXTURE - OCCUPANCY SENSOR CONTROLLED
A1		RECESSED LED EM 12'X12' LIGHT FIXTURE - OCCUPANCY SENSOR CONTROLLED
B1		SURFACE MOUNT 4' LED LIGHT - OCCUPANCY SENSOR CONTROLLED
C		EXTERIOR RECESSED LED ADJUSTABLE WALL WASHER LIGHT - PHOTO CELL ON / TIME CLOCK OFF
D		EXTERIOR VANDAL RESISTANT SURFACE MOUNT LIGHT - PHOTO CELL ON / TIME CLOCK OFF
E		EXTERIOR LED WALL PACK - PHOTO CELL ON / TIME CLOCK OFF
OS		CEILING MOUNTED OCCUPANCY SENSOR
OA		OUTSIDE AIR SUPPLY GRILLE, RE: MECH.
EF		EXHAUST FAN GRILLE, RE: MECH.
CH-1		FAN FORCED WITH SURFACE FRAME

NOTE: REFER TO ELECTRICAL/MECHANICAL PLANS FOR ALL DETAILS AND SPECIFICATIONS.



 **02 REFLECTED CEILING PLAN**
SCALE: 1/4" = 1'-0"



 **01 ROOF PLAN**
SCALE: 1/4" = 1'-0"



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REVISIONS:

PROFESSIONAL SEAL:

ISSUE DATE:
December 9, 2024

90% CONSTRUCTION DOCUMENTS

DRAWN BY: _____ CHECKED BY: _____

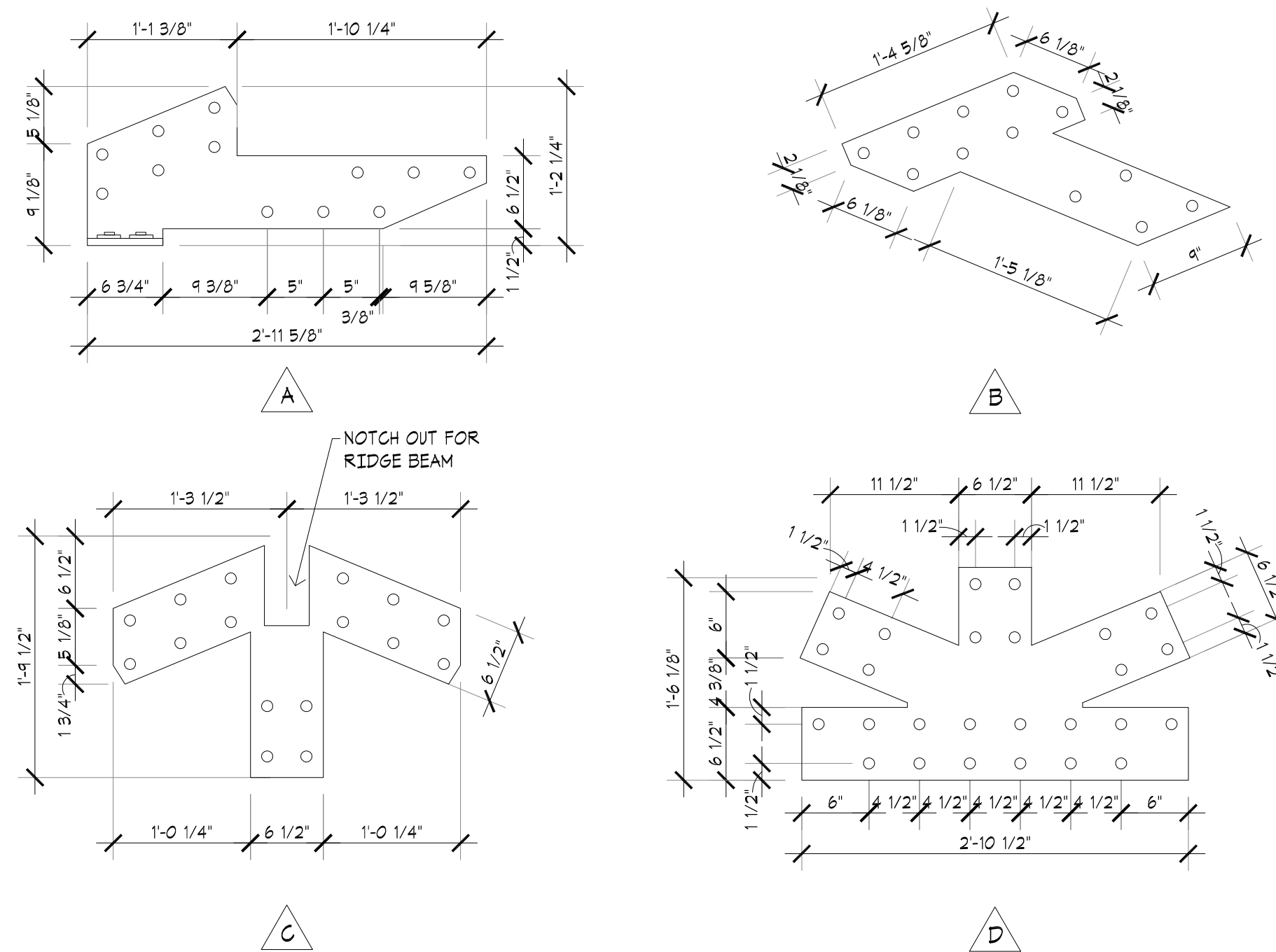
PICNIC SHELTER
FRAMING PLAN

SHEET NUMBER

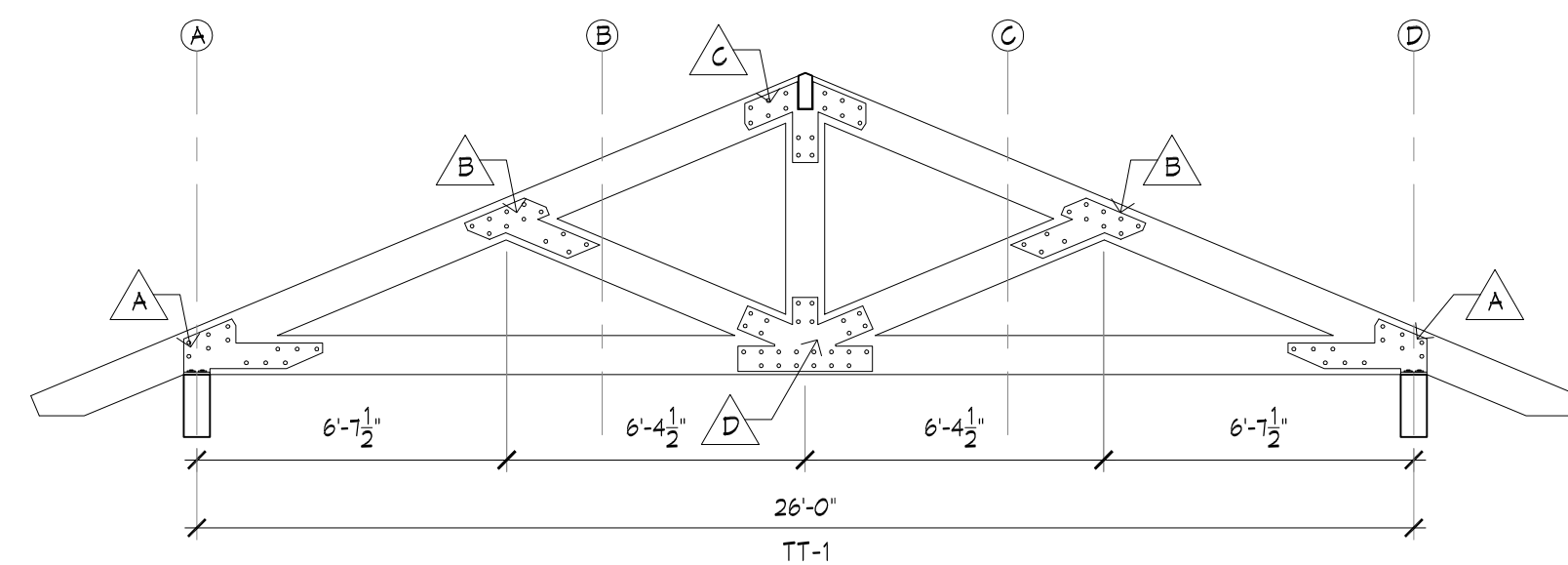
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DRAWING IS NOT TO SCALE
UNLESS PRINTED ON SHEET
SIZE: 22"x34" (ANSI D)

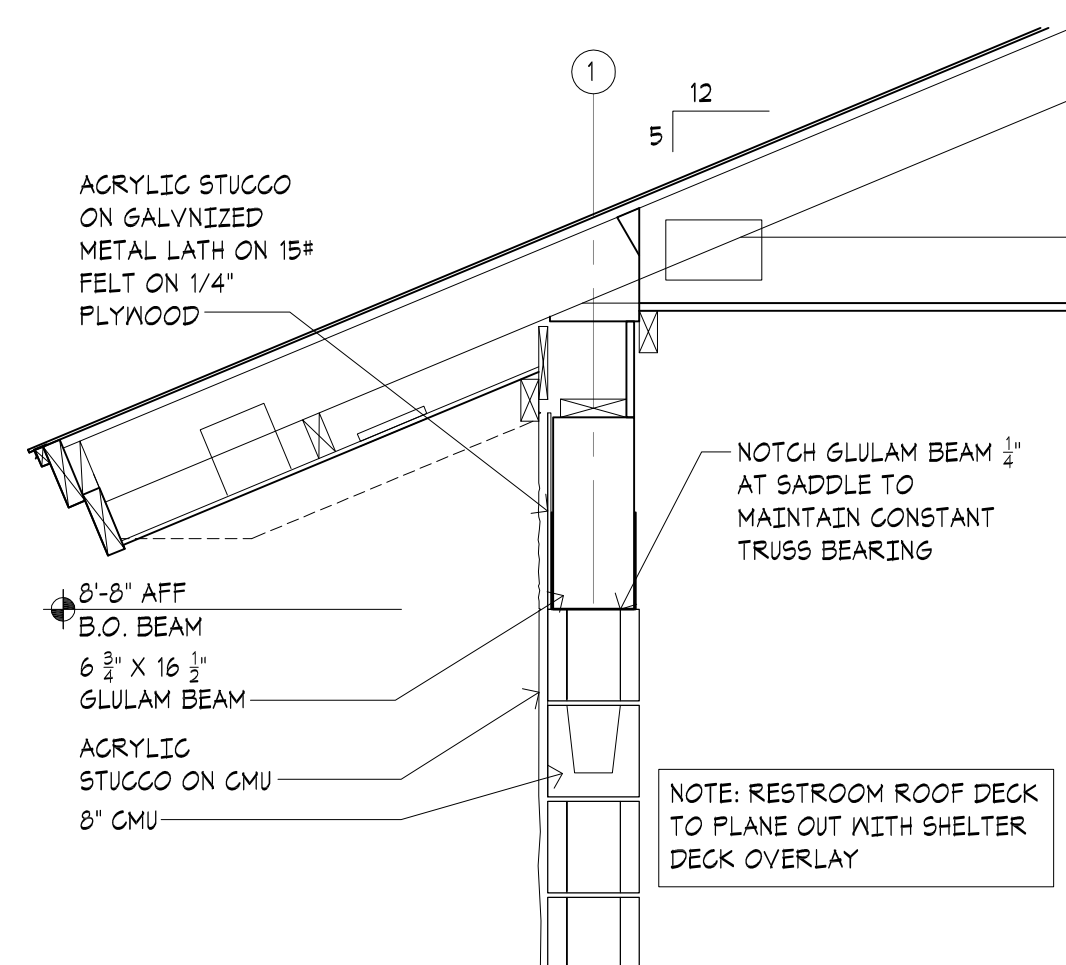
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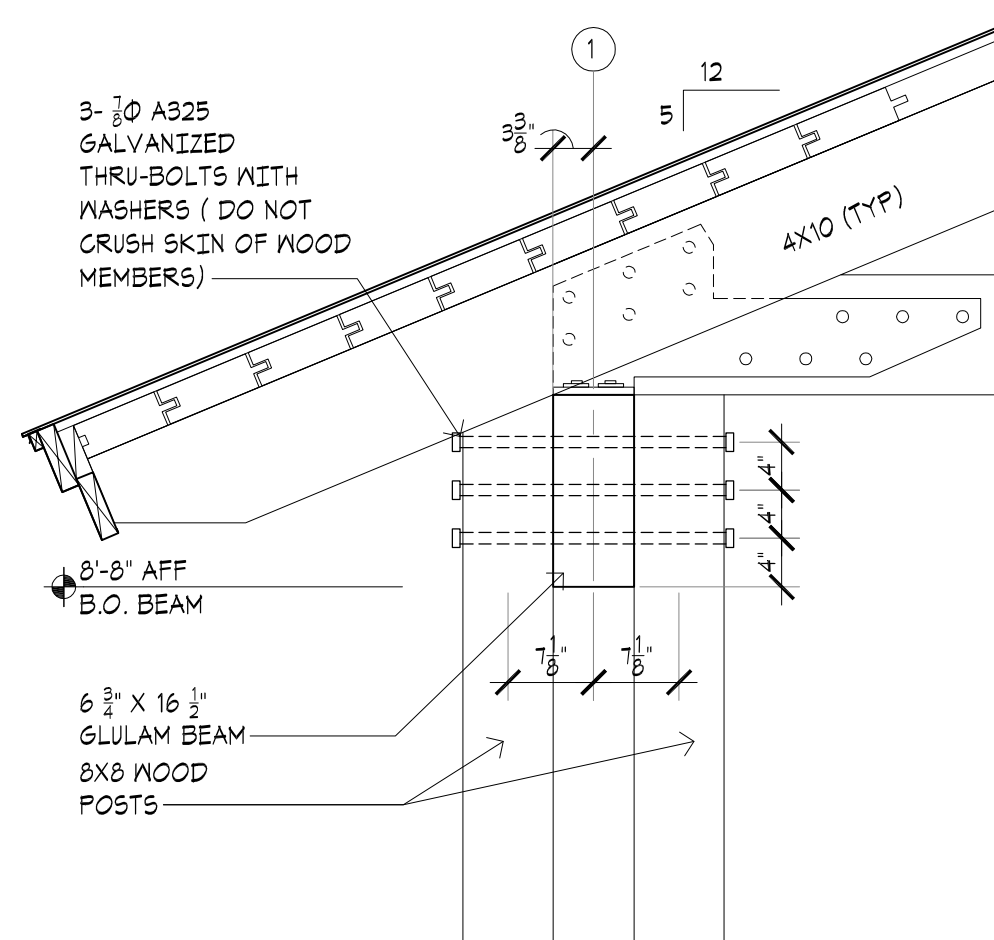
03 CONCEALED CONNECTION PLATE TYPES



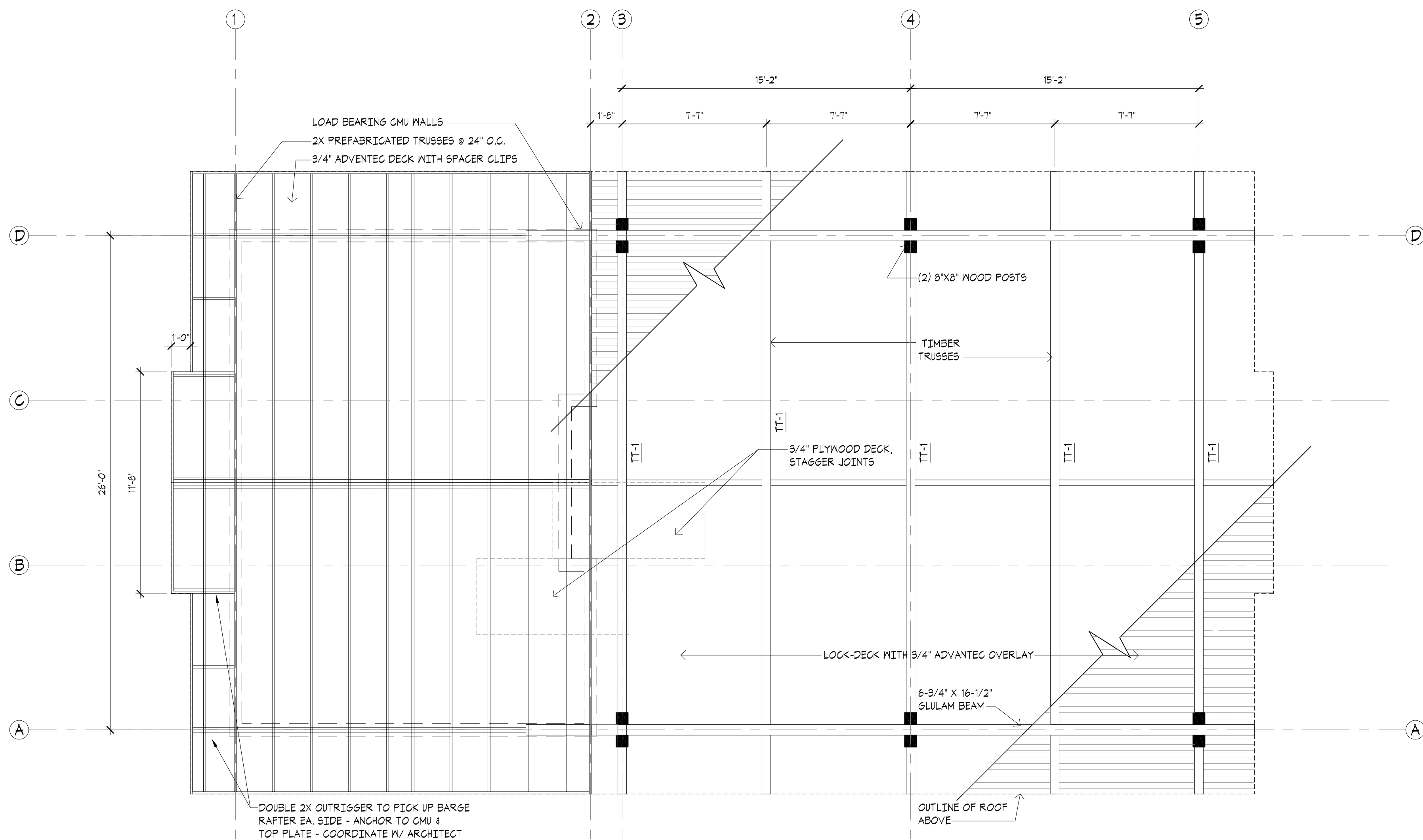
02 TRUSS ELEVATIONS



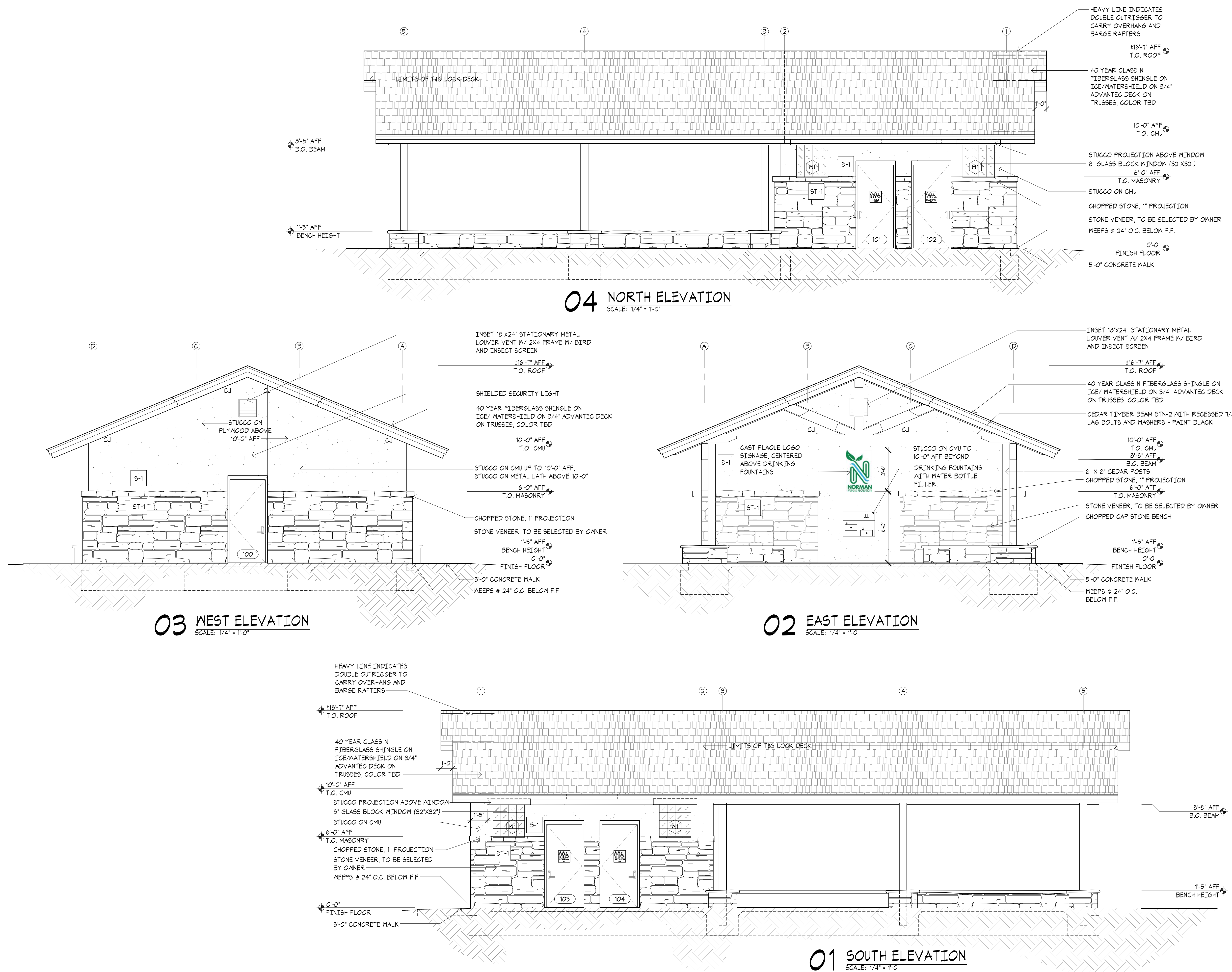
05 SECTION DETAIL @ BEAM
SCALE: 3/4" = 1'-0"

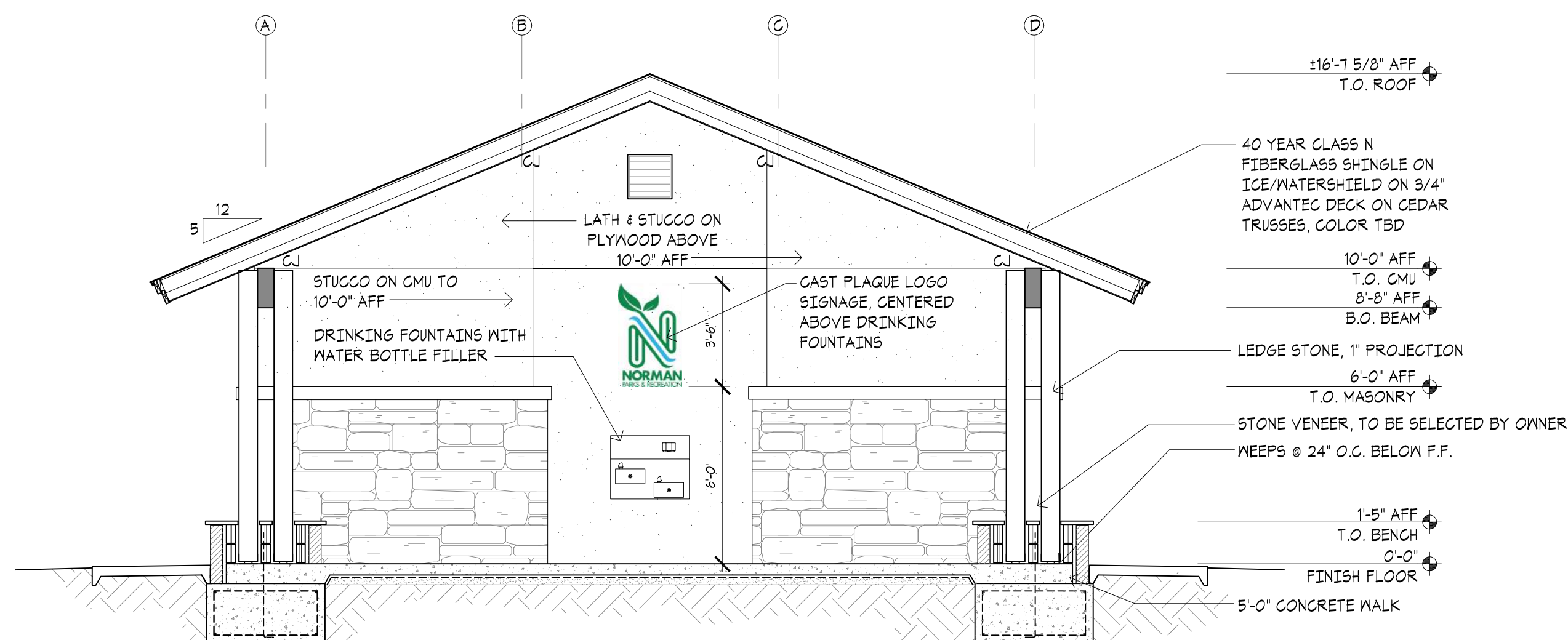


04 SECTION DETAIL @ DOUBLE COLUMN
SCALE: 3/4" = 1'-0"

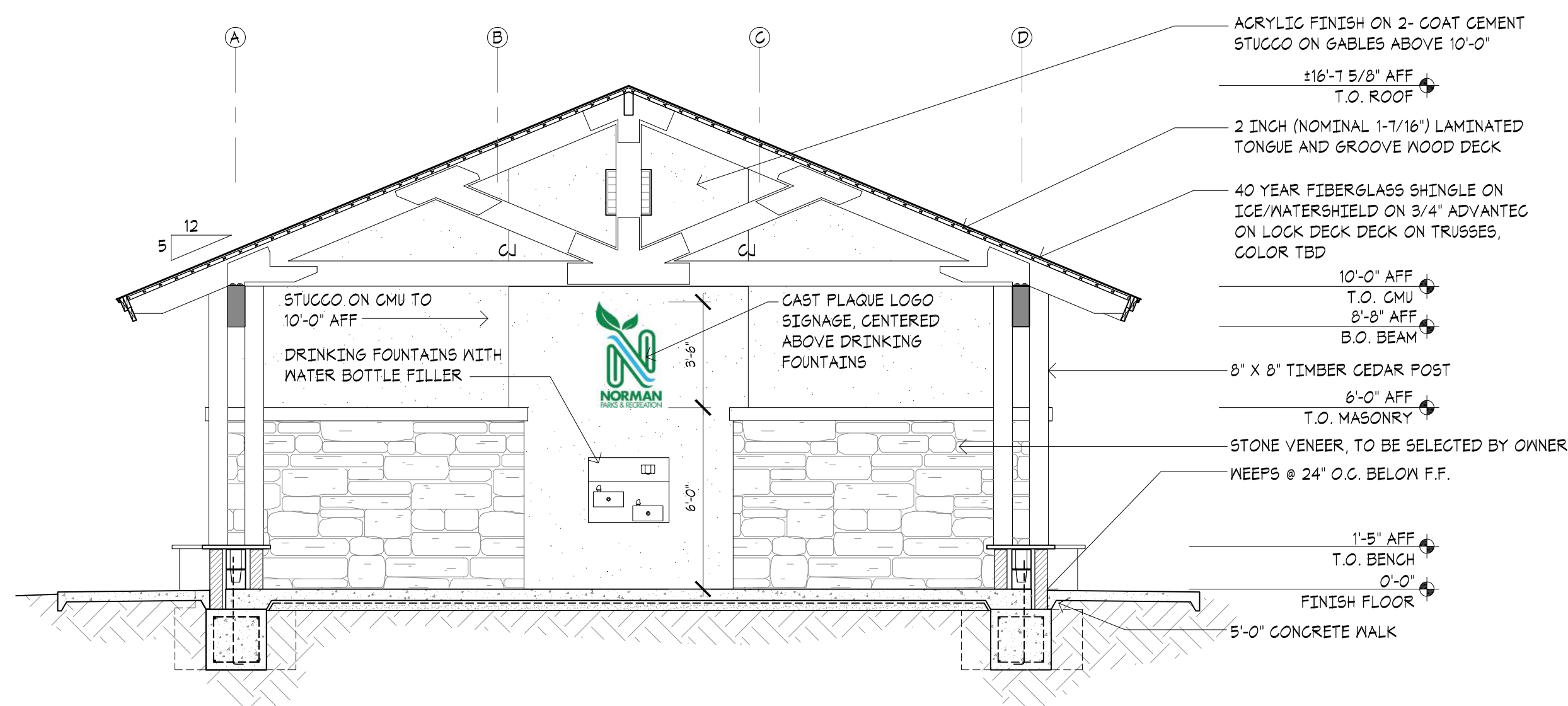


01 FRAMING PLAN
SCALE: 1/4" = 1'-0"

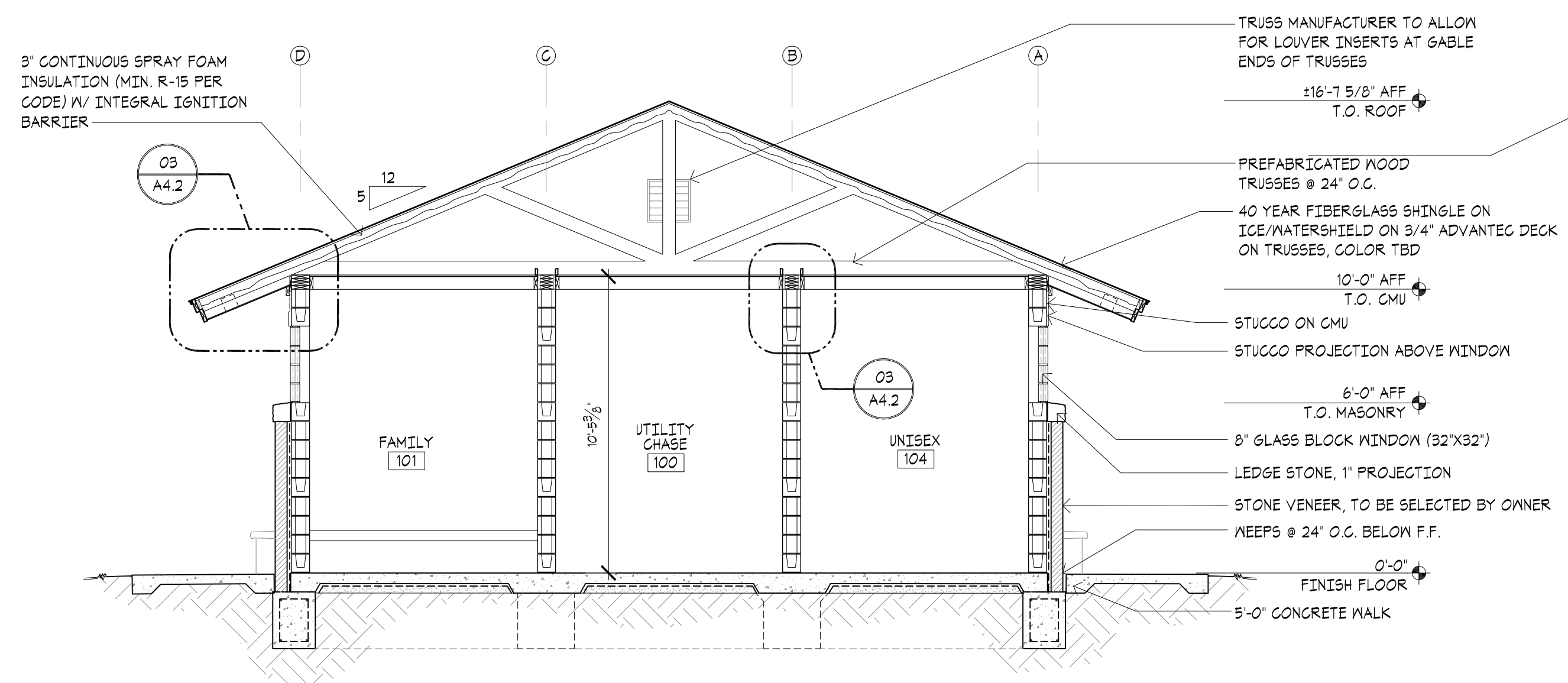




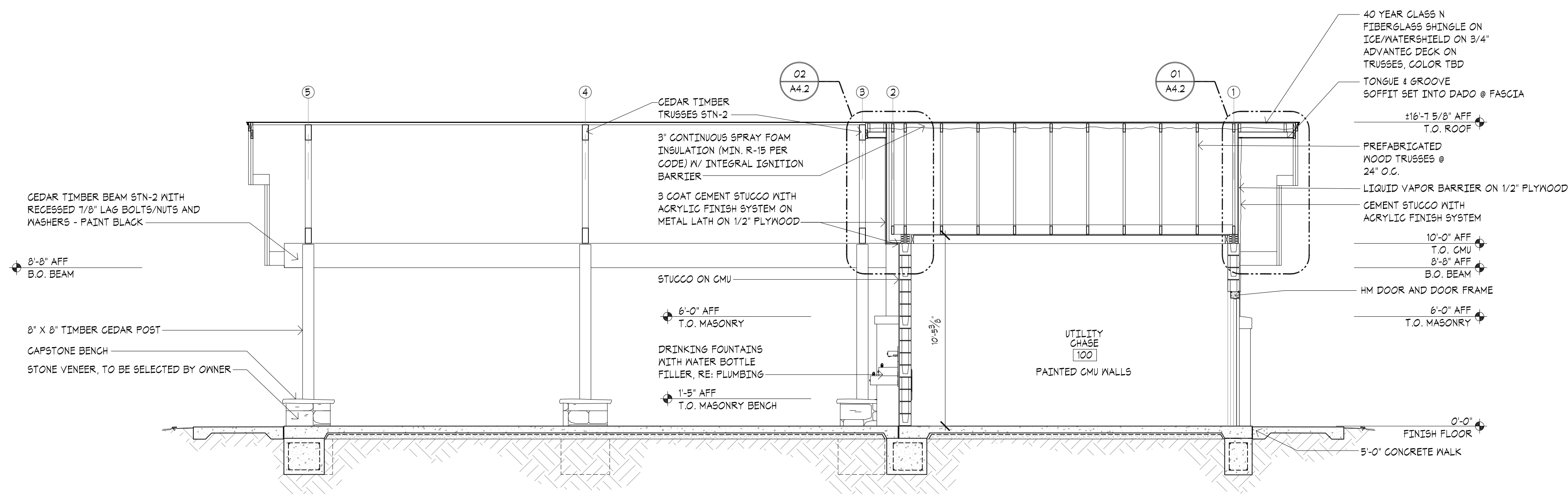
04 BUILDING SECTION



02 BUILDING SECTION



03 BUILDING SECTION



01 BUILDING SECTION
SCALE: 1/4" = 1'-0"

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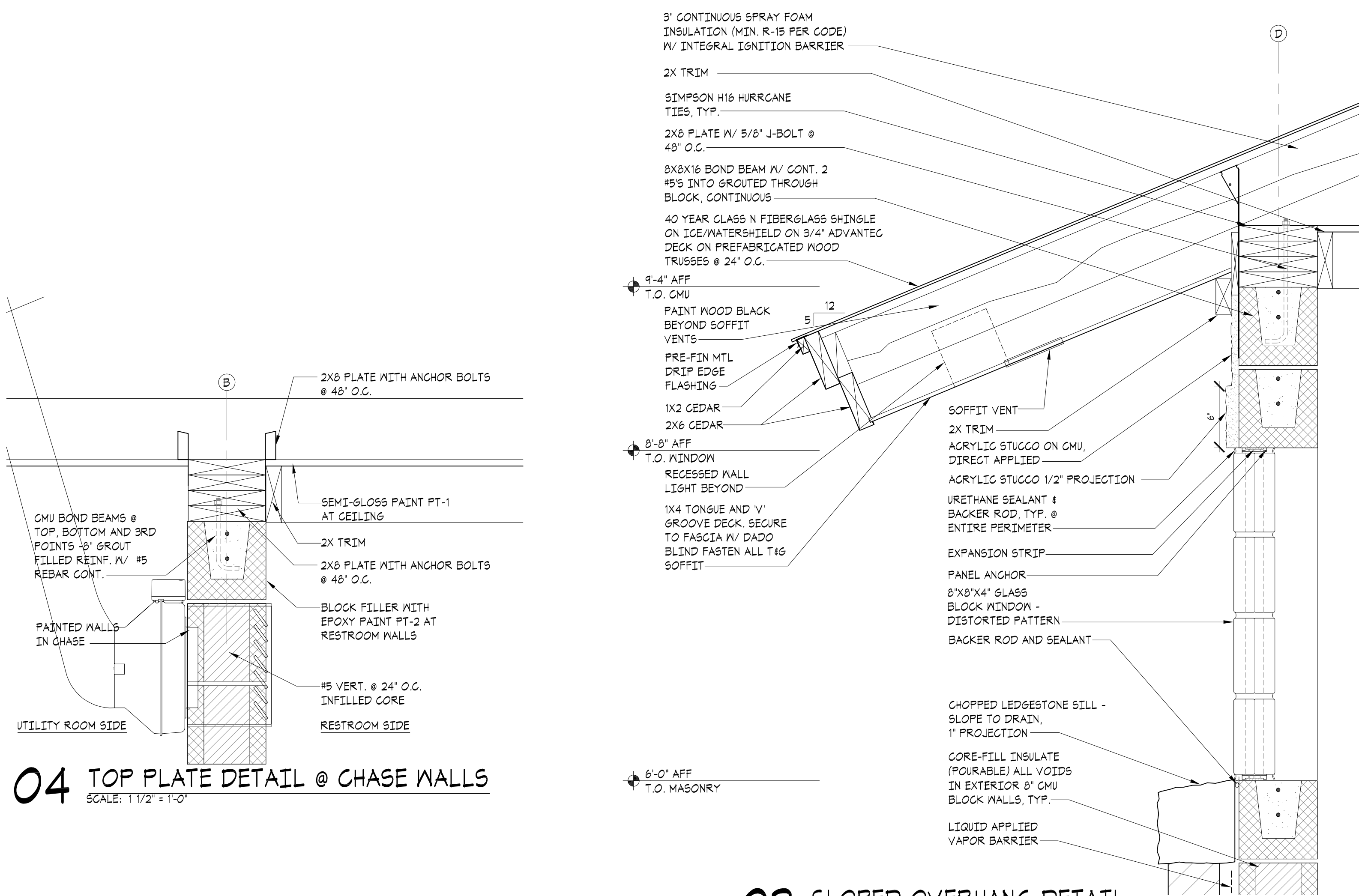
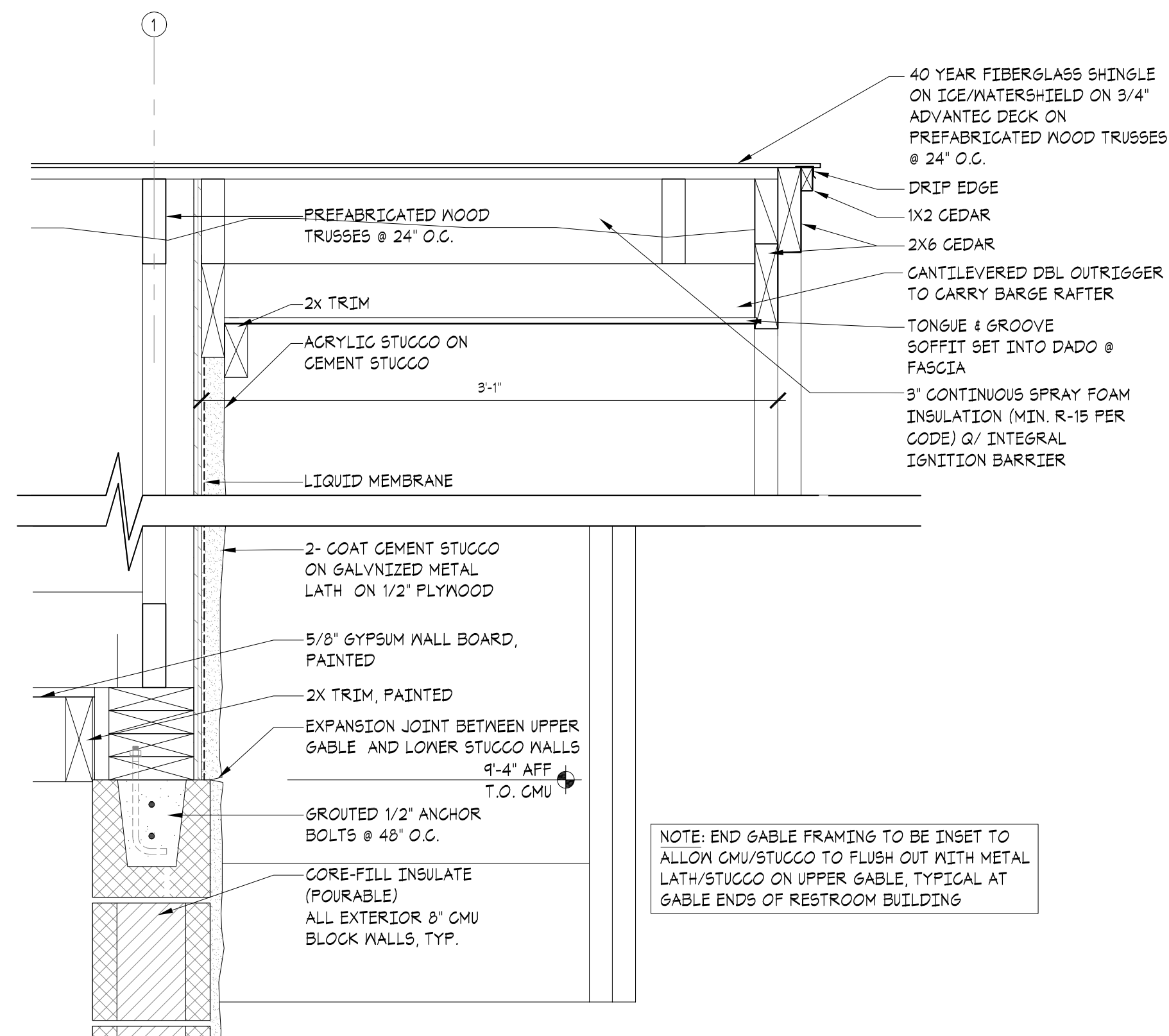
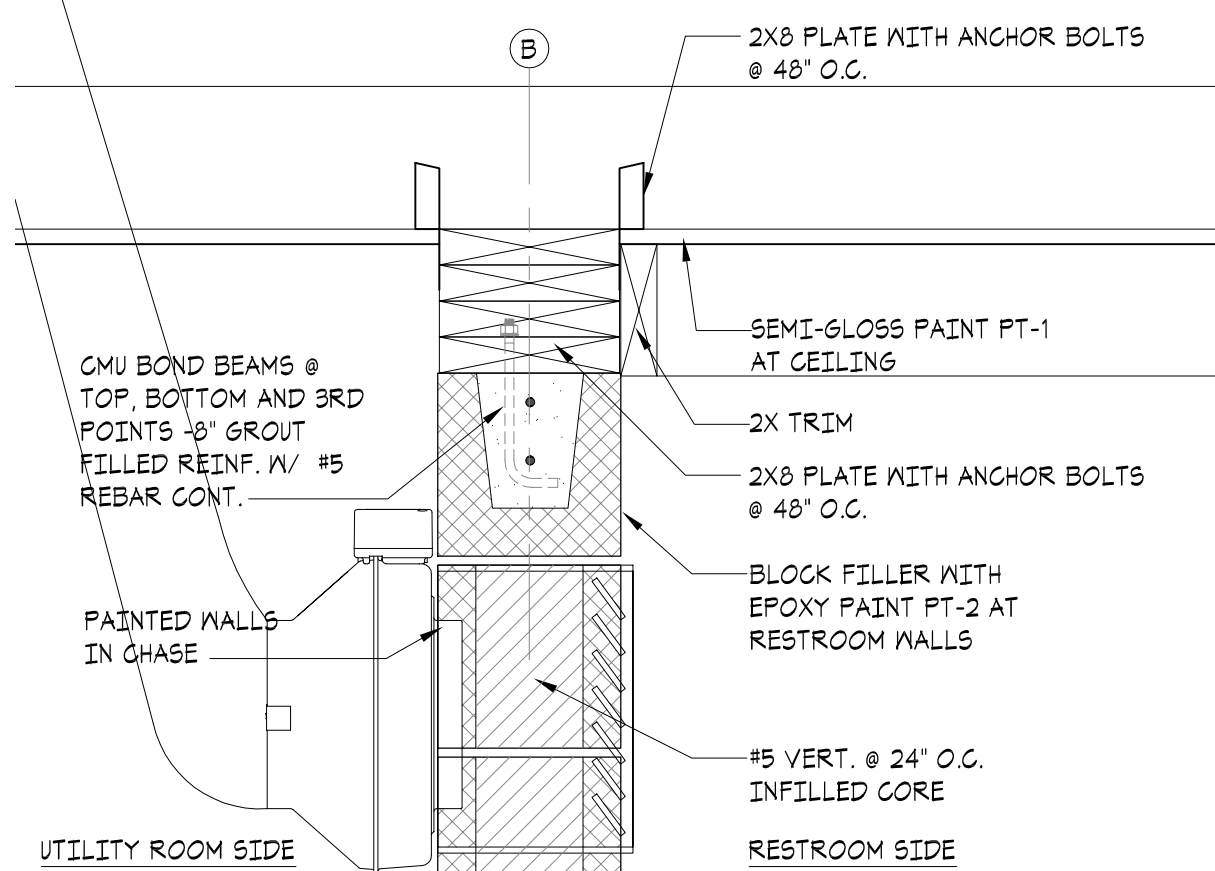
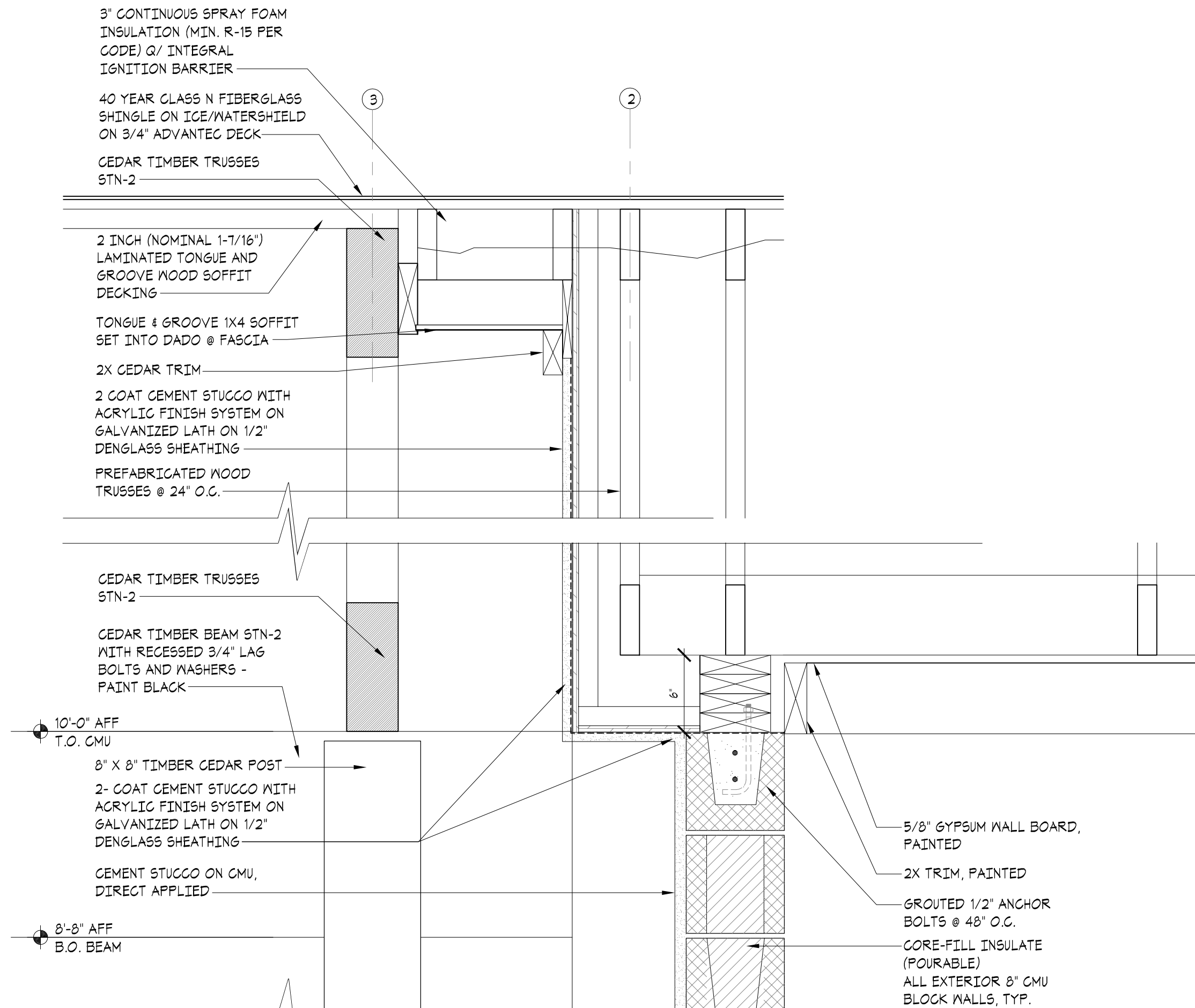
DRAWN BY: CHECKED BY:

SHEET NAME:

PICNIC SHELTER
SECTION DETAILS

SHEET NUMBER:

A 4.2

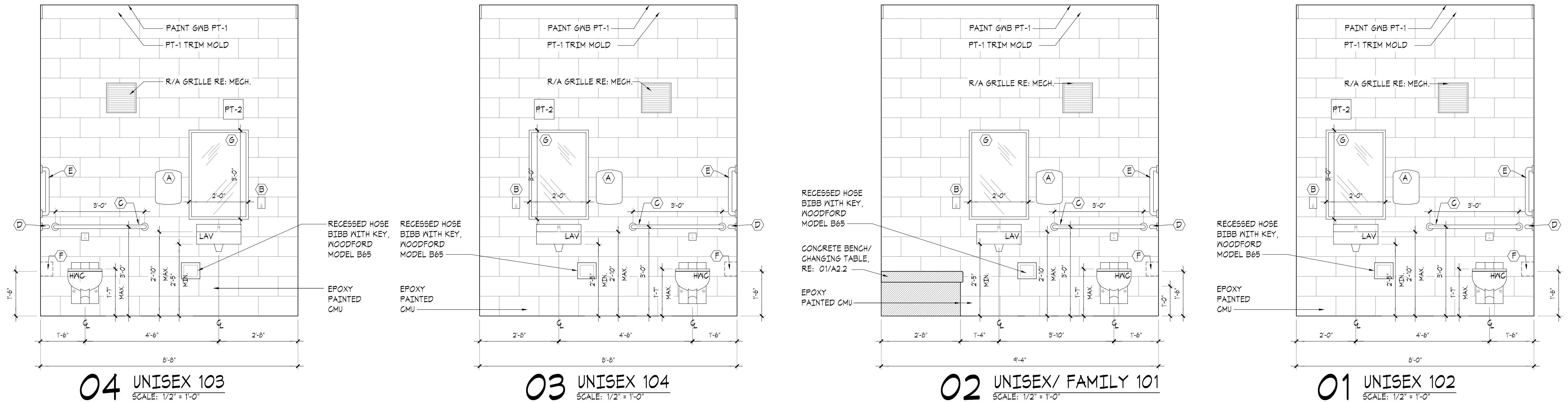
DRAWING IS NOT TO SCALE
UNLESS PRINTED ON SHEET
SIZE: 22"x34" (ANSI D)03 SLOPED OVERHANG DETAIL
SCALE: 1 1/2" = 1'-0"01 GABLE OVERHANG DETAIL
SCALE: 1 1/2" = 1'-0"04 TOP PLATE DETAIL @ CHASE WALLS
SCALE: 1 1/2" = 1'-0"02 ROOF DETAIL
SCALE: 1 1/2" = 1'-0"

FINISH NOTES

1. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER PREPARATION OF ALL NEW SURFACES IN A SATISFACTORY MANNER TO RECEIVE NEW FINISHES. THIS INCLUDES THE DEMOLITION AND REMOVAL OF NECESSARY ITEMS. TOUCH-UP AND/OR REFINISH OF SURFACES DAMAGED BY SUBSEQUENT WORK SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. ALL WORK SHALL BE PERFORMED IN CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDED INSTALLATION METHODS. THE GENERAL CONTRACTOR SHALL PREPARE THE FLOOR PRIOR TO THE APPLICATION OF SEALANT.
2. ALL INTERIOR SURFACES WHICH ARE TO RECEIVE A PAINT FINISH SHALL BE PRIMED AND FINISHED IN ACCORDANCE WITH THE WRITTEN SPECIFICATIONS.
3. ALL JOINTS IN GYPSUM BOARD WALLS SHALL BE FINISHED WITH PAPER TAPE 2" WIDE AND THREE COATS OF VINYL DRY OR PREMIXED JOINT COMPOUND. ALL OUTSIDE CORNERS SHALL BE FINISHED WITH METAL CORNER BEADS, TAPED AND SPACKLED. JUST PRIOR TO THE APPLICATION OF THE FIRST COAT OF PAINT, WIPE SANDED SURFACES WITH A DAMP CLOTH IN ORDER TO LAY FLAT ANY NAP WHICH MAY HAVE FORMED IN SANDING.
4. ALL FINISHES SHALL BE TOUCHED UP TO CORRECT ANY IMPERFECTIONS AFTER INSTALLATION. FIXTURE CONTRACTOR SHALL PROVIDE TO THE GENERAL CONTRACTOR ALL MATERIALS FOR TOUCH UP WORK.
5. THE INTENT OF THE FINISH SPECIFICATION IS TO PROVIDE A SATISFACTORY FINISH TO ALL PARTS OF THE WORK. COVER ALL SURFACES THOROUGHLY. IF THE SPECIFIED NUMBER OF COATS DOES NOT ACCOMPLISH THE INTENT, THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE APPLICATION OF ADDITIONAL COATS OF THE SPECIFIED MATERIAL TO GIVE SATISFACTORY COVERAGE.

FINISH SCHEDULE

FINISH CODE	MATERIAL	MANUFACTURER	DESCRIPTION/CATALOG NO.
PT-1	PAINT & PRIMER	SHERWIN WILLIAMS	SW 9110 MALABAR GMB CEILING SEMI-GLOSS @ CEILING, 2 COATS
PT-2	EPOXY PAINT	SHERWIN WILLIAMS	SW 9109 NATURAL LINEN, MACROPOXY HS, HIGH SOLIDS EPOXY PAINT (BLOCK FILLER - KEM CATI-COAT HS EPOXY FILLER/SEALER) CMU WALLS - 1 COAT BLOCK FILLER, 2 COATS EPOXY PAINT SEMI-GLOSS @ WALLS
PT-3	PAINT	SHERWIN WILLIAMS	SW 9109 NATURAL LINEN HM DOORS AND FRAMES SEMI-GLOSS @ METAL - PRIMER & 2 COATS
F-1	SEALED CONCRETE	CONCRETE SEALERS USA	PS101 SILICONATE MULTI-SURFACE (SMOOTH) WATER-BASED PENETRATING SEALER - ZERO VOC
STN-1	STAIN	TBD	COLOR TBD, CONTRACTOR TO SUBMITTAL FULL RANGE OF COLORS FOR OWNER TO SELECT FROM
STN-2	STAIN	TBD	COLOR TBD, CONTRACTOR TO SUBMITTAL FULL RANGE OF COLORS FOR OWNER TO SELECT FROM
S-1	STUCCO	TBD	COLOR TBD 2 COAT CEMENT STUCCO WITH ACRYLIC STUCCO FINISH
ST-1	STONE VENEER	MINICK MATERIALS	COLOR & PATTERN TBD FROM STANDARD STOCK, NATURAL STONE LOOK SIMILAR TO ARKANSAS HACKETT COLOR TO BE SELECTED BY OWNER, COLORED GROUT TO BE PROVIDED - PREPARE IN-PLACE MOCK-UP



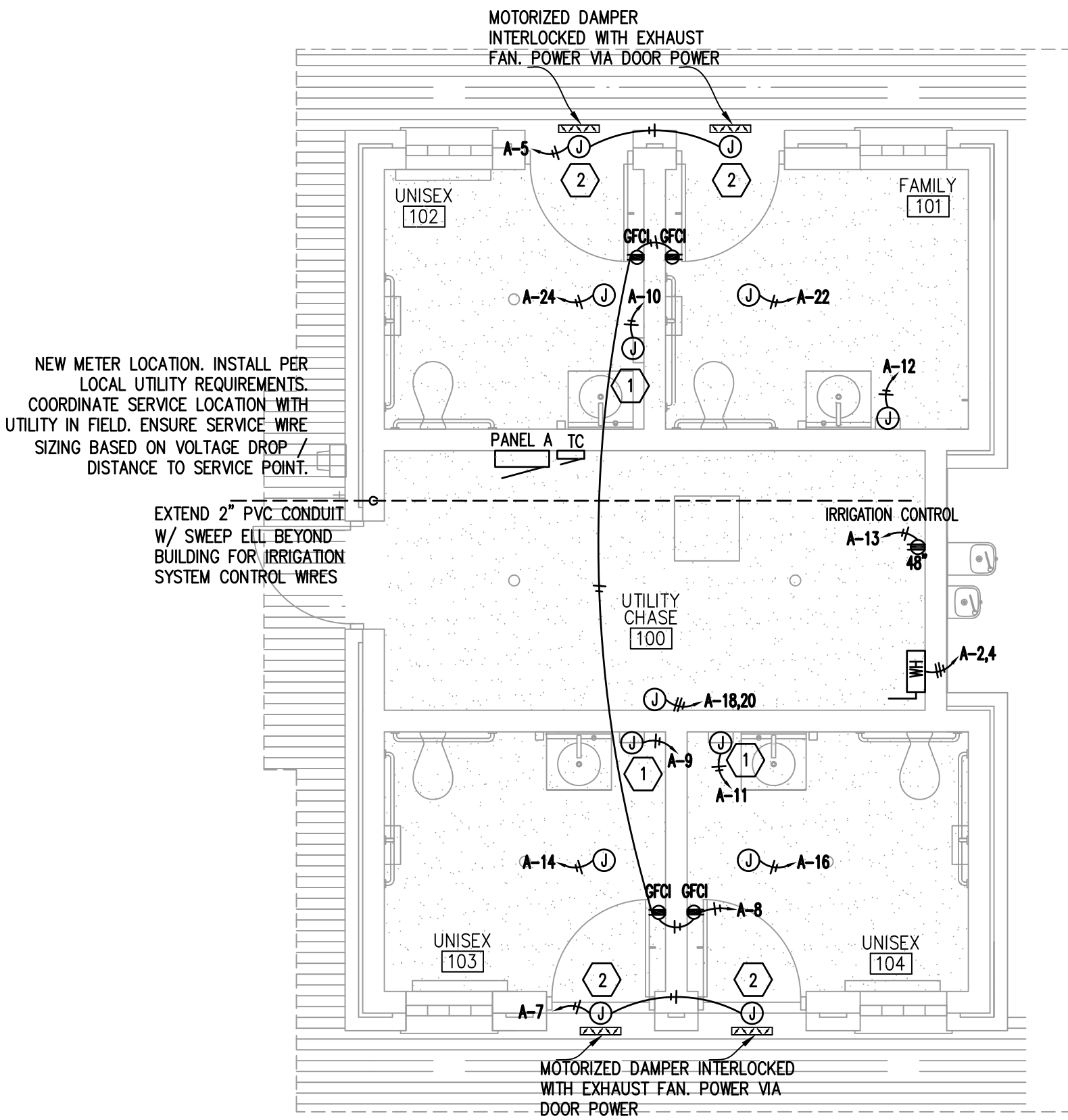
KEY NOTES	
①	POWER TO HAND DRYER. INSTALL PER MANUFACTURED INSTALLATION MANUAL. COORDINATE FINAL LOCATION IN FIELD WITH ARCHITECT. (1) DEDICATED 20 AMP, 120 VOLT GFCI CIRCUIT PER DRYER. CONCEAL CONDUIT IN CMU WALLS.
②	ACCESS CONTROL HARDWARE AT ENTRY DOORS TO RESTROOMS. E.G. TO COORDINATE WITH GC AND DOOR MANUFACTURER FOR CONNECTION REQUIREMENTS.

SWITCH DESIGNATIONS	
Ⓢ	OCCUPANCY / MOTION SENSOR CONTROL WITH INTEGRAL ADJUSTABLE TIMER. SET TO MAX 30 MINUTES. WATSTOPPER PASSIVE INFRARED CEILING SENSOR CS-100
Ⓟ	STANDARD LIGHT SWITCH

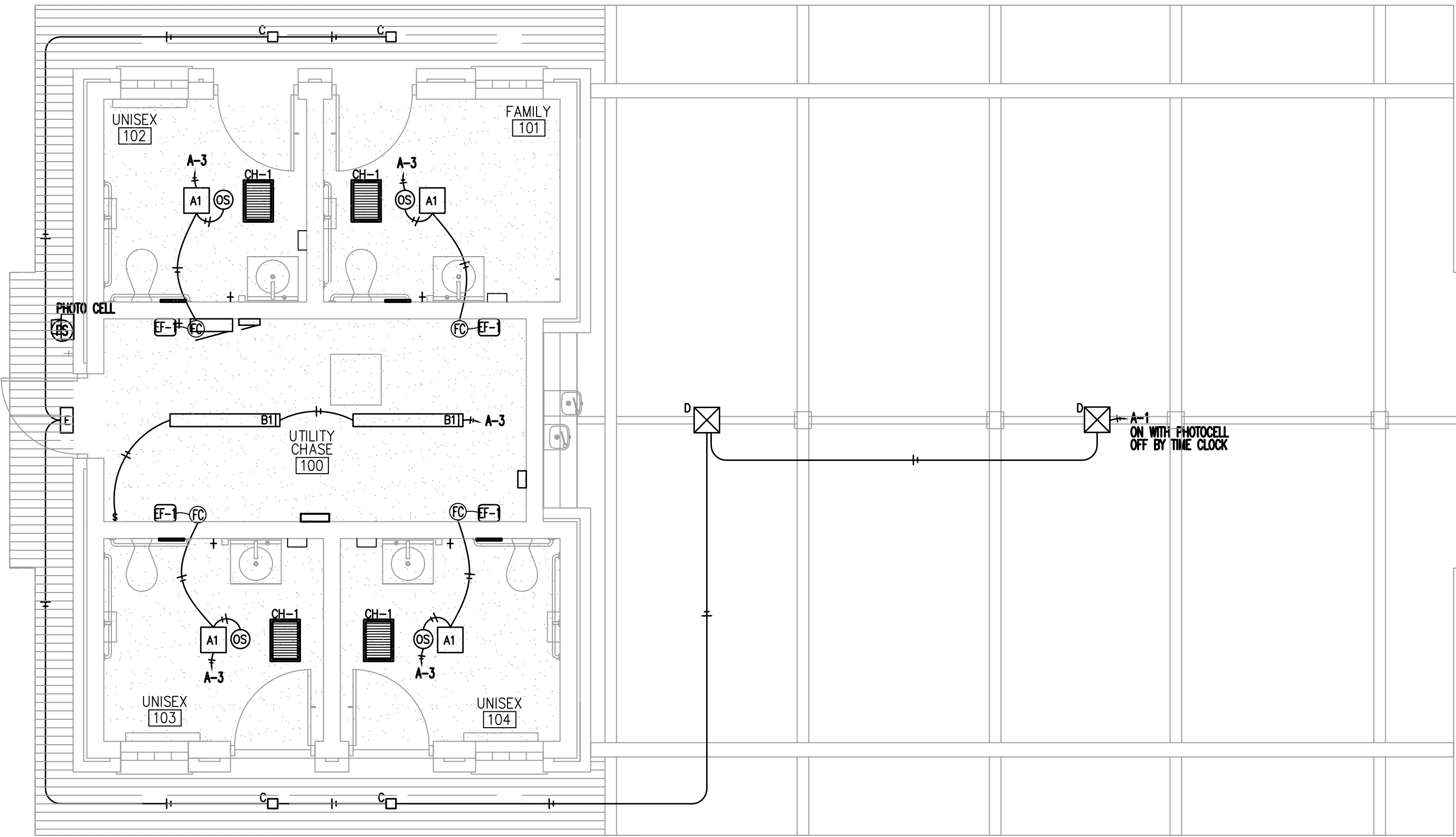
ELECTRICAL SYMBOLS	
	POWER PANELBOARD OR DISTRIBUTION PANEL
	RECEPTACLES & OUTLETS (MOUNT BOTTOM OF BOX AT 15" AFF U.L.O.) (WALL DIM NOTED TO CENTER OF BOX)
	DUPLEX RECEPTACLE, 20A, 120V, 3 WIRE GROUNDED TYPE (WHITE)
	JUNCTION BOX
	GFCI DUPLEX RECEPTACLE, 20A, 120V, 3 WIRE GROUNDED TYPE (WHITE)
	DISCONNECT

GENERAL NOTES	
1.	BRANCH CIRCUIT WIRING SHALL BE AS FOLLOWS: A. LIGHTING AND POWER NETWORKS: (120/208V, 3/4, 4W) 1) 100 FEET OR LESS: PHASE - 3/12 AWG NEUTRAL - 3/12 AWG GROUND - 1/2" EMT 2) GREATER THAN 100 FEET: INCREASE ALL CONDUCTORS BY ONE WIRE GUAGE SIZE. 3) TWO NETWORKS MAXIMUM PER CONDUIT.
2.	MINIMUM CONDUIT SIZE SHALL BE 3/4", UNLESS OTHERWISE NOTED OR INDICATED.
3.	ALL EMERGENCY, EXIT AND NIGHT LIGHTING WIRED AHEAD OF LOCAL SWITCHING.

LIGHT FIXTURE LEGEND				
A	RECESSED LED 12"x12" OCCUPANCY SENSOR CONTROLLED WET LOCATION	KIRKLAND LIGHTING	USC-11535-4500L 120V-35W-20-45-46	74W LED
A1	RECESSED LED 12"x12" OCCUPANCY SENSOR CONTROLLED WET LOCATION	KIRKLAND LIGHTING	USC-11535-4500L 120V-35W-20-45-46	74W LED
BT1	SURFACE MOUNTED 4' LED LIGHT OCCUPANCY SENSOR CONTROLLED	COLUMBIA LIGHTING	LXEM-350M-40P-E-U-ELL14	42W LED
□	EXTERIOR RECESSED LED WALL MOUNTED	ELITE LIGHTING	HHSOLOD-400L-DIMM-120-30W-40-90/LED4007-40-30	12W LED
⊠	SURFACE MOUNTED 12"x12" VAPOR RESISTANT WET LOCATION	COOPER LIGHTING	G12 PP BLK L24 20W 30 CL 120 EDC1	20W LED
E	EXTERIOR LED WALL PACK 90 MINUTE BATTERY BACKUP	HARBELL LIGHTING	SP1-20-307-FI-UNV-08-POU-E	21W LED



01 ELECTRICAL POWER PLAN
SCALE: 3/8" = 1'-0"



02 ELECTRICAL LIGHTING PLAN
SCALE: 3/8" = 1'-0"

GENERAL NOTES

- ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE AND ALL APPLICABLE LOCAL AND STATE CODES.
- ALL MATERIAL, EQUIPMENT AND APPLIANCES SHALL BE NEW AND SHALL CONFORM TO THE STANDARDS OF THE UNDERWRITER'S LABORATORIES, INC. AND THE NATIONAL MANUFACTURER'S ASSOCIATION.
- ALL ELECTRICAL PERMITS AND INSPECTION FEES SHALL BE OBTAINED AND PAID FOR BY THE ELECTRICAL CONTRACTOR.
- ELECTRICAL CONTRACT DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF ELECTRICAL EQUIPMENT. DO NOT SCALE ELECTRICAL PLANS. OBTAIN ALL DIMENSIONS FROM THE ARCHITECT'S DIMENSIONED DRAWINGS AND FIELD MEASUREMENTS. THE CONTRACTOR SHALL REVIEW ARCHITECTURAL PLANS FOR DOOR SWINGS AND BUILT-IN EQUIPMENT; CONDITIONS INDICATED ON THOSE PLANS SHALL GOVERN FOR THIS WORK.
- VERIFY ALL REQUIREMENTS AND COORDINATE EXACT LOCATION OF ELECTRICAL SERVICE WITH LOCAL POWER COMPANY PRIOR TO PROJECT START. NOTIFY ENGINEER OF ANY CHANGES.
- ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR ONE YEAR EFFECTIVE FROM DATE THE DATE OF SUBSTANTIAL COMPLETION.
- A COMPLETE GROUNDING SYSTEM SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH ARTICLE 250 OF THE NEC, AND AS SHOWN ON THE DRAWINGS.
- ALL CUTTING PATCHING REQUIRED FOR INSTALLATION OF ELECTRICAL EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. DO NOT CUT ANY MATERIAL THAT WILL WEAKEN THE STRUCTURE WITHOUT WRITTEN PERMISSION OF THE ARCHITECT. PATCHING SHALL BE ACCOMPLISHED TO MATCH ADJACENT SURFACES IN EVERY RESPECT. ENGAGE ORIGINAL INSTALLER FOR CUTTING/PATCHING OF ROOFS.
- PROVIDE A TYPED DIRECTORY IN ALL PANELBOARDS CLEARLY DESCRIBING THE LOCATION AND TYPE OF LOAD SERVED FOR ALL CIRCUITS.
- PROVIDE ENGRAVED PHENOLIC NAMEPLATES FOR ALL PANELBOARDS AND DISCONNECT SWITCHES, WHITE LETTERS ON BLACK BACKGROUND. NAMEPLATE SHALL CONTAIN EQUIPMENT DESIGNATION, VOLTAGE, FEEDER SOURCE & DATE.
- PROVIDE "FLASH HAZARD" LABELS FOR ALL PANELBOARDS IN ACCORDANCE WITH NEC REQUIREMENTS.
- ALL TERMINALS/LUGS SHALL BE 60 DEGREES/75 DEGREE RATED.
- FUSES 0-600 AMPS SHALL BE UL CLASS "RK-5" LOW PEAK DUAL ELEMENTS TIME DELAY WITH 200,000 AMPERE INTERRUPTING RATING AS MANUFACTURED BY BUSSMAN UNLESS NOTED OTHERWISE.
- NOT USED.
- ELECTRICAL CONTRACTOR SHALL MAKE ALL FINAL ELECTRICAL CONNECTIONS TO EQUIPMENT REGARDLESS OF WHO SUPPLIES THE EQUIPMENT. THIS INCLUDES ALL HVAC, PLUMBING AND OWNER FURNISHED EQUIPMENT CONNECTIONS OF 120V OR HIGHER.
- RACEWAYS SHALL BE INSTALLED CONCEALED IN NEW WALL CONSTRUCTION, ABOVE CEILINGS, BELOW FLOOR AND IN OTHER CAVITIES TO THE GREATEST EXTENT POSSIBLE. WHERE EXPOSED RACEWAYS MUST BE USED, LAYOUT RACEWAYS TO MINIMIZE THE NUMBER OF VERTICAL RUNS.
- ALL EXPOSED RACEWAYS SHALL BE RUN PARALLEL TO THE BUILDING SURFACES AND SHALL BE PAINTED AS DIRECTED BY THE ARCHITECT. NO EXPOSED CONDUIT SHALL BE ALLOWED IN FINISHED SPACES EXCEPT AS PERMITTED BY THE OWNER OR ARCHITECT. EXPOSED RACEWAY IN FINISHED SPACES SHALL BE WIREMOLD TYPE.
- BEFORE COMMENCING WITH ANY ROUGH-IN, COORDINATE THE EXACT LOCATION AND MOUNTING HEIGHT OF ALL WALL MOUNTED DEVICES WITH THE ARCHITECTURAL INTERIOR ELEVATIONS, CASEWORK, SHOP DRAWINGS, AND EXISTING CONDITIONS. IF ANY DISCREPANCIES ARE DISCOVERED, NOTIFY THE ARCHITECT FOR FURTHER DIRECTION. MINOR ADJUSTMENTS IN DEVICE LOCATION, 1/8" - 5/16" IN ANY DIRECTION SHALL BE DONE AT NO ADDITIONAL COST TO THE CONTRACT.
- ALL WIRING SHALL BE INSTALLED IN IMC, RMC, EMT OR TYPE AC FLEXIBLE CABLE. RMC CONDUIT (PVC) SHALL ONLY BE USED UNDERGROUND AND OUTDOORS, WHERE NOT SUBJECT TO PHYSICAL DAMAGE. MINIMUM SIZE CONDUIT SHALL BE 1/2". AC FLEXIBLE CABLE SHALL BE USED ONLY IN AREAS PERMITTED BY CODE.
- ALL FLEX SHALL BE LIQUID TIGHT FLEXIBLE METAL.
- PROVIDE A PULL WIRE OR FISH TAPE IN ALL EMPTY CONDUITS. PROVIDE A BLANK COVER PLATE OVER ALL UNUSED BOXES INCLUDING DATA/COMM BOXES.
- WHERE A SINGLE HOMERUN IS SHOWN THE CIRCUIT SHALL BE INSTALLED IN A DEDICATED CONDUIT, DO NOT COMBINE WITH OTHER CIRCUITS. WHERE A CIRCUIT HOMERUN IS NOT SHOWN THE CONTRACTOR SHALL COMBINE CIRCUITS, WHERE A CIRCUIT HOMERUN IS NOT SHOWN THE CONTRACTOR SHALL COMBINE CIRCUITS AS FOLLOWS AND IN ACCORDANCE WITH THE NEC:
A MAXIMUM OF THREE 20A, 1POLE BRANCH CIRCUITS MAY BE COMBINED IN A COMMON HOMERUN SHARING A COMMON NEUTRAL OR WITH SEPARATE NEUTRALS, FOR A TOTAL OF SIX CURRENT CARRYING CONDUCTORS. ALL BRANCH CIRCUITS LARGER THAN 20A. SHALL BE SEPARATE HOMERUN TO PANEL.
- CONDUCTORS SHALL BE COPPER, RATED AT NO LESS THE 600 VOLTS. MINIMUM SIZE SHALL BE NO. 12 AWG UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL WIRE #8 AWG AND LARGER SHALL BE STRANDED. #10 THRU #12 AWG CONDUCTORS SHALL BE SOLID. ALL INSULATION TYPES SHALL BE THWN OR THHN.
- 20A/120V BRANCH CIRCUITS EXCEEDING 100' IN LENGTH FROM PANEL TO FARTHEST DEVICE SHALL USE NO. 10 CONDUCTORS AND 3/4" C.
- FOR EVERY WORKING DEVICE MARK THE BRANCH CIRCUIT TO WHICH IT IS CONNECTED ON THE BACK OF EACH DEVICE PLATE, USING AN INDELIBLE MARKER PEN.
- WHITE DEVICES AND PLATES.
- EXACT LOCATION OF ALL FLOOR-MOUNTED OUTLETS SHALL BE COORDINATED WITH THE ARCHITECT BEFORE ROUGH-IN.
- TWO OR MORE ADJACENT POWER OR COMMUNICATION RECEPTACLES SHALL BE GANGED WITH A COMMON FACE PLATE - IF THEY CAN NOT BE GANGED THEY SHALL BE INSTALLED WITH A MINIMUM DISTANCE BETWEEN UNITS.
- WALL RECEPTACLES SHOWN BACK TO BACK MAY BE OFFSET BUT SHALL BE INSTALLED DIRECTLY ADJACENT TO ONE ANOTHER.
- LIGHT SWITCHES SHALL BE NO MORE THAN 6" FROM EDGE OF DOOR FRAME.
- WHERE PENETRATIONS ARE MADE THROUGH A REQUIRED FIRE-RESISTIVE WALL, OR PARTITION FOR THE PURPOSE OF RUNNING RACEWAY CARRYING ELECTRICAL, TELEPHONE, TELEVISION, OR LOCAL COMMUNICATION AND/OR SIGNALING CIRCUITS, THE OPENING AROUND THE RACEWAY SHALL BE FIRE STOPPED PER THE STATE BUILDING CODE. COORDINATION WITH THE GENERAL CONTRACTOR SHALL BE MAINTAINED TO INSURE THAT THIS FIRE STOPPING IS ACCOMPLISHED. USE APPROVED ASSEMBLIES SUCH AS THE FOLLOWING:
* CONDUIT PENETRATIONS OF 1,2,3, & 4 HOUR GYP BOARD WALLS - U.L.#WL1001
* CONDUIT PENETRATIONS OF 2,3, & 4 HOUR CONCRETE OR BLOCK WALLS - U.L.#CAJ1001
* CONDUIT PENETRATIONS OD 2,3,& 4 HOUR CONCRETE FLOORS - U.L.#CAJ1001
* CONDUIT PENETRATIONS OF 1 HOUR GYP BOARD CEILING ASSEMBLY - L526
* MULT. CONDUIT PENETRATIONS OF 2,3,& 4 HOUR CONCRETE OR BLOCK WALL OR FLOOR - CAJ1042
- IN REQUIRED FIRE RATED WALLS AND PARTITIONS, OPENINGS FOR INSTALLATION OF OF BOXES THAT ARE GREATER THAN 16 SQUARE INCHES SHALL BE PROTECTED AS REQUIRED BY U.L. COORDINATE CLOSELY WITH THE GENERAL CONTRACTOR TO INSURE THAT THE INTEGRITY OF THE U.L. RATING IS MAINTAINED.
- OUTLET BOXES FOR DEVICES MOUNTED ON OPPOSITE SIDES OF FIRE RATED PARTITIONS SHALL NOT BE MOUNTED IN THE SAME WALL CAVITY. SEPARATED WALL PENETRATIONS BY MOUNTING ON OPPOSITE SIDES OF WALL STUDS OR OTHER VERTICAL STRUCTURAL MEMBERS IN THE WALL.
- (SEISMIC REQUIREMENTS) ELECTRICAL EQUIPMENT SHALL MEET THE REQUIREMENTS OF SECTION 1621 OF THE 2002 IBC.

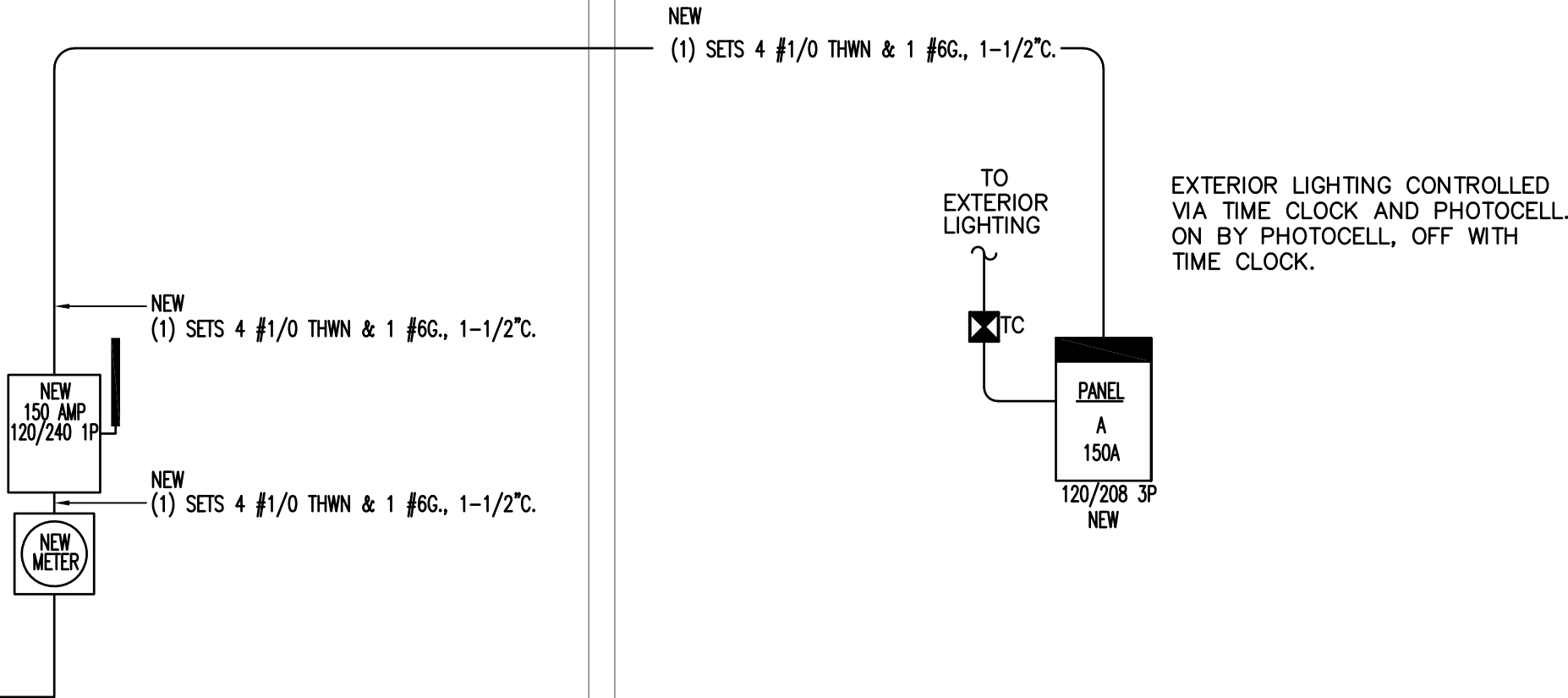
ELECTRICAL PANEL SCHEDULE A											
NEW SURFACE MOUNTED NEMA 3R LOCKABLE				FULLY RATED 150 MAIN BREAKER				120 / 240 / 1Ø / 3 WIRE		65,000 AIC (VIF)	
CIRCUIT BREAKER	TYPE	WIRE AND CONDUIT	LOAD SERVED	CIRCUIT NUMBER	LOAD WATTS		CIRCUIT NUMBER	LOAD SERVED	WIRE AND CONDUIT	TYPE	CIRCUIT BREAKER
					ØA	ØB					
20A / 1P		2 #12 THHN & 1 #12 G IN 3/4"C	LIGHTING	1	109	0					
20A / 1P		2 #12 THHN & 1 #12 G IN 3/4"C	LIGHTING	3	3600	460	2	WATER HEATER	3 #8 THHN & 1 #8 G IN 3/4"C	HACR	20A
20A / 1P		2 #12 THHN & 1 #12 G IN 3/4"C	DOOR OPENER	5	1800	3600	4				2P
20A / 1P		2 #12 THHN & 1 #12 G IN 3/4"C	DOOR OPENER	7	0	1800	6	SPACE			
20A / 1P		2 #12 THHN & 1 #12 G IN 3/4"C	HAND DRYER	9	915	1080	8	CONVENIENCE RECEPTACLE	2 #12 THHN & 1 #12 G IN 3/4"C		20A / 1P
20A / 1P		2 #12 THHN & 1 #12 G IN 3/4"C	HAND DRYER	11	915	915	10	HAND DRYER	2 #12 THHN & 1 #12 G IN 3/4"C	HACR	20A / 1P
20A / 1P		2 #12 THHN & 1 #12 G IN 3/4"C	IRRIGATION CONTROL	13	540	915	12	HAND DRYER	2 #12 THHN & 1 #12 G IN 3/4"C	HACR	20A / 1P
			SPACE	15	1800	0	14	WALL HEATER	2 #12 THHN & 1 #12 G IN 3/4"C	HACR	20A / 1P
			SPACE	17	0	1800	16	WALL HEATER	2 #12 THHN & 1 #12 G IN 3/4"C	HACR	20A / 1P
			SPACE	19	2500	0	18	WALL HEATER - UTILITY CHASE	3 #8 THHN & 1 #8 G IN 3/4"C	HACR	30A
			SPACE	21	0	2500	20				2P
			SPACE	23	1800	0	22	WALL HEATER	2 #12 THHN & 1 #12 G IN 3/4"C	HACR	20A / 1P
			SPACE	25	0	1800	24	WALL HEATER	2 #12 THHN & 1 #12 G IN 3/4"C	HACR	20A / 1P
TOTALS					13979	14870					
AMP LOAD					116	124					
TOTAL CONNECTED LOAD WATTS									28849		
TOTAL LOAD KVA / AMPS									28.8	124	

PROVIDE WITH GROUND BUS

CODE LOAD ANALYSIS PER N.E.C.

CODE LOAD ANALYSIS PANEL A			
LOAD DESCRIPTION	CONNECTED KVA	DEMAND FACTOR	KVA DEMAND
LIGHTING	569	125%	711
SIGNAGE	0	125%	0
RECEPTACLES	4680	FIRST 10 KW 100%	4680
	0	REMAINDER @ 50%	0
WATER HEATING	7200	125%	9000
HVAC EQUIPMENT	12200	100%	12200
		LGT MOTOR @25%	750
MISCELLANEOUS	4200	100%	4200
TOTALS	28849		29681
CALCULATED SERVICE DEMAND AMPERES			124 amps

E.C. SHALL BE RESPONSIBLE FROM EXISTING POINT OF SERVICE THROUGHOUT NEW PUBLIC RESTROOMS. ENSURE SYSTEM IS FULLY CODE COMPLIANT AND OPERATIONAL. E.C. SHALL MODIFY AS NECESSARY DEPENDANT ON FIELD CONDITIONS. E.C. SHALL ENSURE EXTERIOR MEANS OF DISCONNECT PER FIRE MARSHALL.



SERVICE WIRE SHALL BE SIZED BASED ON 150 AMP 240 VOLT SINGLE PHASE SERVICE WITH A 2% VOLTAGE DROP. COORDINATE IN FIELD FOR SERVICE CONNECTION LOCATION.

75 FEET AT 150 AMPS #1/0 = 1.1% VOLTAGE DROP
100 FEET AT 150 AMPS #1/0 = 1.5% VOLTAGE DROP
125 FEET AT 150 AMPS #1/0 = 1.8% VOLTAGE DROP
150 FEET AT 150 AMPS #2/0 = 1.8% VOLTAGE DROP
250 FEET AT 150 AMPS #4/0 = 1.8% VOLTAGE DROP
350 FEET AT 150 AMPS #300 = 1.8% VOLTAGE DROP

01 ONE LINE DIAGRAM



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SHEET NAME:

ELECTRICAL PANELS AND
ONE LINE DIAGRAM

SHEET NUMBER:

E2.0

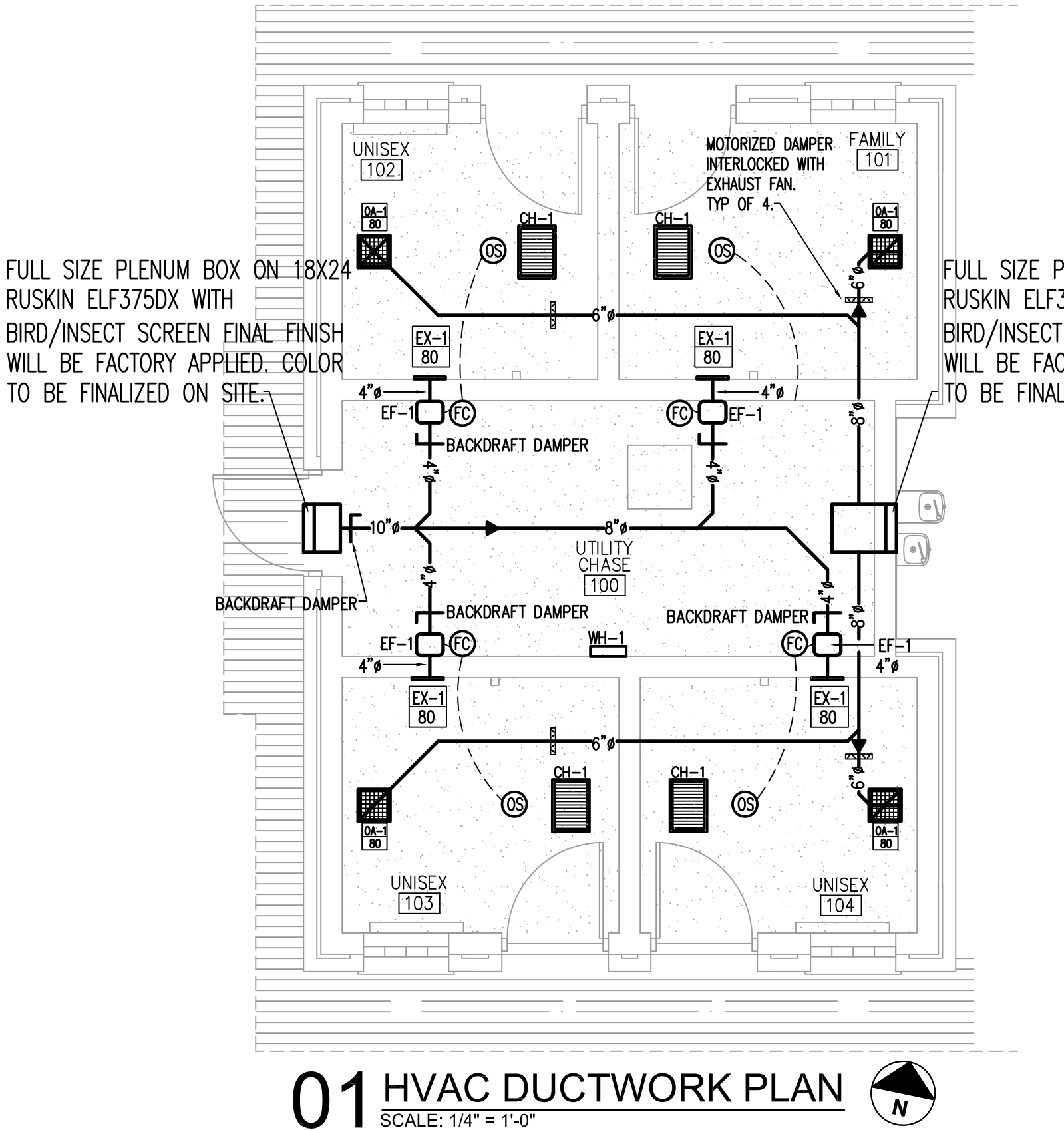
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SIZE: 22"x34" (ANSI D)



EXHAUST FAN SCHEDULE							
	CFM	SP " W.C.	RPM	DRIVE	WATTS	VOLTAGE PH. / HZ.	MANUFACTURER MODEL NO.
EF-1	80	0.4"	2,600	DIRECT	20	120/1/60	FANTECH FR100
NOTES: 1) FAN SHALL BE DUCT MOUNTED PER MANUFACTURER. 2) FAN SHALL BE CONTROLLED BY THE TOILET ROOM OCCUPANCY SENSOR VIA REMOTE MOUNTED WC15 SPEED CONTROL IN CHASE ROOM.(FC) FAN CONTROLLER BALANCED TO 80 CFM. 3) FAN SHALL BE PROVIDED WITH LOW LEAKAGE BACKDRAFT DAMPER.							

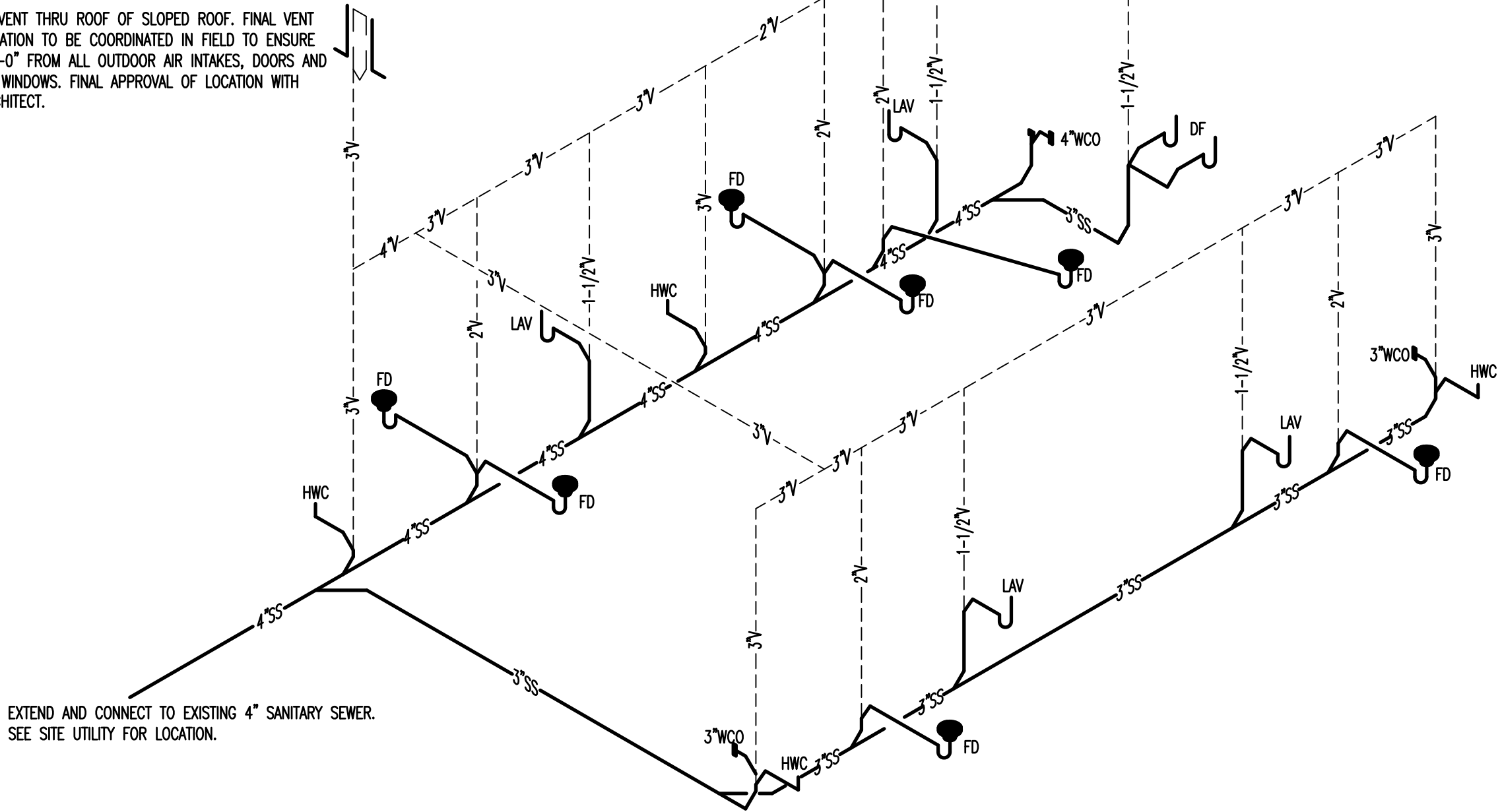
GRILLE, REGISTER & DIFFUSER SCHEDULE							
	MARK	MFGR.	MODEL	NECK VELOCITY FPM (MAX)	DEVICE SIZE	MOUNTING	TYPE
	EX-1 80	TITUS	350F	500	12012	SURFACE	EXHAUST
	DA-1 80	TITUS	350F	500	12012	SURFACE	OUTDOOR AIR
NOTES: 1. MOUNTING FRAMES SHALL BE COMPATIBLE WITH CEILING TYPE. 2. PROVIDE FACTORY WHITE FINISH/NO ALTERNATES ACCEPTED. COLOR TO BE APPROVED BY OWNER/ARCH. SUBMIT STANDARD FINISHES FOR APPROVAL. 3. NO ALTERNATES ACCEPTED.					DIFFUSER NECK SIZING		
					0-99 CFM	6"	
					100-175 CFM	8"	
					176-275 CFM	10"	
					276-400 CFM	12"	
					401-535 CFM	14"	

ELECTRIC HEATER				
MARK	MFGR.	MODEL	WALL BOX	POWER
CH-1	MARKEL CEILING RECESSED	E30380WBW		1.8 KW 120V 1Ø 15 AMP
WH-1	MARKEL SURFACE MOUNTED	H3423T	3420	5 KW 240V 1Ø 20.8 AMP



01 HVAC DUCTWORK PLAN
SCALE: 1/4" = 1'-0"

4" VENT THRU ROOF OF SLOPED ROOF. FINAL VENT LOCATION TO BE COORDINATED IN FIELD TO ENSURE 10'-0" FROM ALL OUTDOOR AIR INTAKES, DOORS AND OR WINDOWS. FINAL APPROVAL OF LOCATION WITH ARCHITECT.



EXTEND AND CONNECT TO EXISTING 4" SANITARY SEWER. SEE SITE UTILITY FOR LOCATION.

TABLE 709.1 DRAINAGE FIXTURE UNITS	
FIXTURE	DFU
WATER CLOSET	4.0
FLOOR DRAIN	3.0
LAVATORY	1.0
URINAL	4.0
UNIT BY TRAP SIZE TABLE 709.2	
1-1/2"	2.0
2"	3.0
3"	4.0
4"	5.0
710.1(1)	
3" SLOPED AT 1/8" PER FOOT MAXIMUM CONNECTED 36 DRAINAGE FIXTURE UNITS	
4" SLOPED AT 1/8" PER FOOT MAXIMUM CONNECTED 180 DRAINAGE FIXTURE UNITS	

GENERAL COMMENTS

1. NEW WORK, ALTERATIONS OR ADDITIONS TO MECHANICAL AND PLUMBING SYSTEMS ARE SUBJECT TO FIELD INSPECTION.
2. ALL PLUMBING FIXTURES IN NEW CONSTRUCTION SHALL MEET THE FLOW AND PRESSURE REQUIREMENTS IPC TABLES 604.3 & 604.4.
3. PROVIDE CLEAN OUTS IN WASTE PIPING PER IPC 708 AND DBCA/IPC 708.1.3 AND 708.1.4.
4. VENT TERMINATION SHALL COMPLY TO SIZE AND LOCATION REQUIREMENTS OF IPC 903, DBCA/IPC 903.1, AND IPC 904.
5. PROVIDE BACKFLOW ASSEMBLIES PER IPC 608.1 AND DBCA/IPC 608.1.1.
6. DIRECT WASTE PIPING SHALL CONFORM TO IPC CHAPTER 8.
7. PROTECT ALL PIPES FROM FREEZING. IPC 305.4.

PLUMBING LEGEND

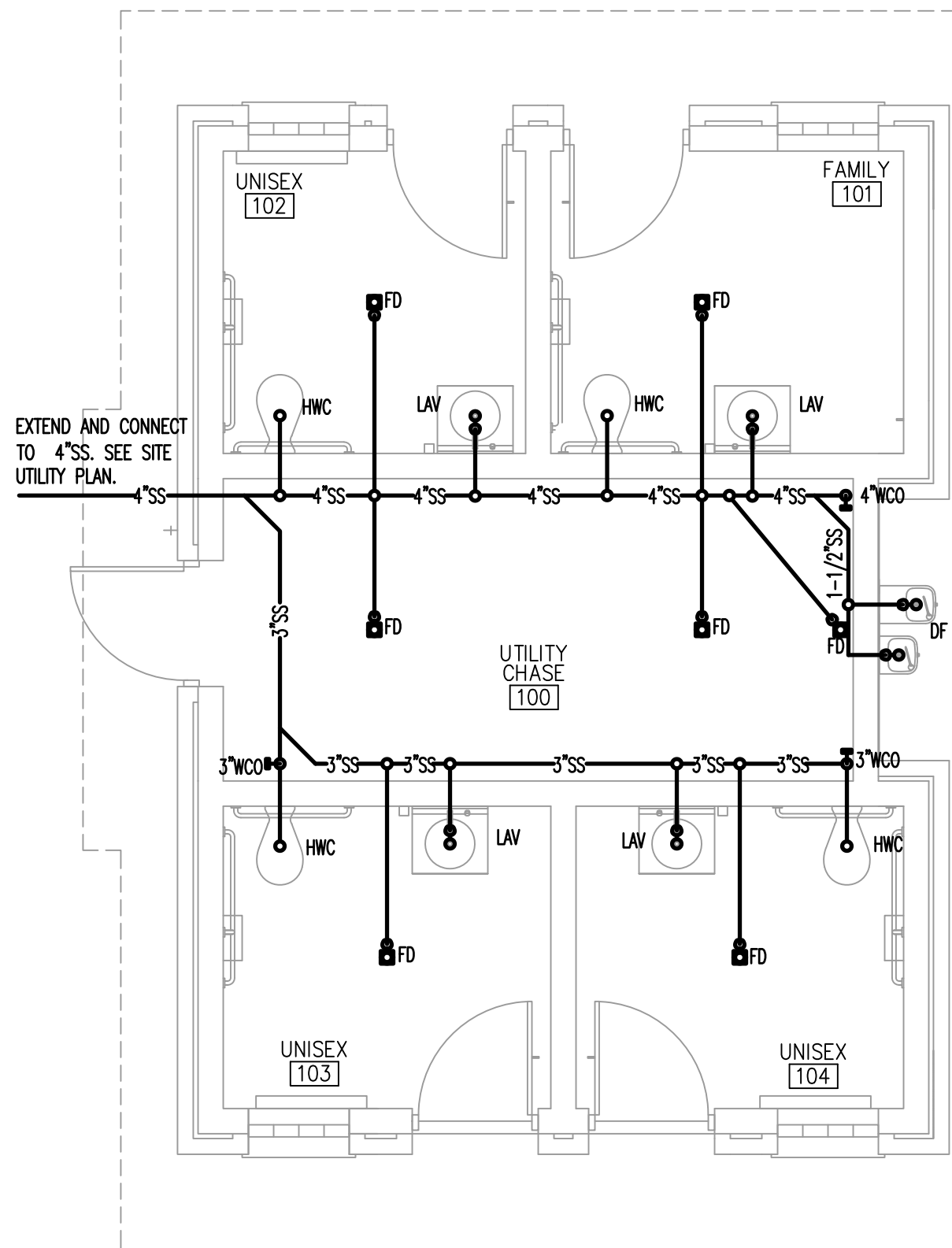
DEFINITION	SYMBOL OR ABBREVIATION
DOMESTIC HOT WATER	-----HW-----
DOMESTIC COLD WATER	-----CW-----
SANITARY WASTE	-----SS-----
RISER DOWN (ELBOW)	⌋
RISER UP (ELBOW)	⌋
TEE DOWN	⌋
BACKFLOW PREVENTER	⌋
CHECK VALVE	⌋
FLOOR DRAIN	□FD
FLOOR CLEANOUT	○FCO

GENERAL NOTES

- A. VERIFY EXACT LOCATIONS, ELEVATIONS AND CHARACTERISTICS OF UTILITIES AND PIPING BEFORE COMMENCEMENT OF WORK, AND IMMEDIATELY NOTIFY PROJECT MANAGER OF ANY DISCREPANCIES.
- B. OBTAIN EXACT LOCATIONS AND MOUNTING HEIGHTS OF PLUMBING FIXTURES IN KITCHEN EQUIPMENT FROM ARCHITECTURAL AND KITCHEN EQUIPMENT DRAWINGS.
- C. CONTRACTOR SHALL MAKE ALL ARRANGEMENTS WITH UTILITY COMPANIES FOR SERVICE AND CONNECTIONS AND PAY FOR ALL PERMITS, FEES, CHARGES AND METERS.
- D. TERMINATE ALL VENT AND FLUE OUTLETS AT 10'-0" MINIMUM FOR ANY FRESH AIR INTAKES
- E. INSTALL ALL PLUMBING TO AVOID INTERFERENCE WITH ELECTRICAL AND MECHANICAL EQUIPMENT AND STRUCTURAL FRAMING. NO WATER OR DRAIN LINES PERMITTED OVER UNDER ELECTRICAL PANELS. INSURE THAT ALL WATER LINES INSIDE ARE ADEQUATELY SECURED.
- F. PROVIDE FAUCETS UNLESS OTHERWISE NOTED, TRAPS, STOPS, GATE VALVE, GAS COCKS, WATER HAMMER ARRESTORS, WALK THE NOTES, COVERS, FLEX CONNECTIONS, SHUT OFF VALVES AND INDIRECT WASTE TO AN APPROVED RECEPTOR AND ALL NECESSARY TRIM FOR COMPLETELY INSTALLED AND CONNECTED PLUMBING SYSTEM
- G. RECORD ON AS BUILT DRAWINGS ALL SIZES, LOCATIONS, INVERTS AND MATERIALS OF EXISTING PIPES THAT ARE ENCOUNTERED AND NEW PIPES INSTALLED DURING THE COURSE OF THE PROJECT DELIVER AS BUILT'S TO THE CONSTRUCTION MANAGER AT THE END OF THE PROJECT
- H. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL LOCAL AND FEDERAL CODES, RULES AND REGULATIONS GOVERNING THIS PROJECT
- I. UPON COMPLETION OF JOB, INSPECT ALL EXPOSED PORTIONS OF THE PLUMBING INSTALLATIONS AND COMPLETELY REMOVE ALL EXPOSED LABELS, SOIL, MARKINGS, AND FOREIGN MATERIAL EXCEPT PRODUCT LABELS AND THOSE REQUIRED BY LAW
- J. TERMINATE ALL INDIRECT WASTE LINES ABOVE FLOOR SINK WITH A TWO PIPE DIAMETER AIR GAP. ALL INDIRECT WASTE PIPING MUST BE HARD PIPED, COPPER DWV PIPING AND FITTINGS ONLY. NO PVC ALLOWED
- K. PLUMBING CONTRACTOR SHALL VERIFY INSTALLATION REQUIREMENTS FOR FLOOR DRAINS. THE GOVERNING AUTHORITY HAVING JURISDICTION MAY REQUIRE THE FOLLOWING: FLOOR DRAINS MAY NEED TO BE RECESSED WITH THE FLOOR SLOPED TO THE DRAIN. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THIS INFORMATION AND INSTALLING THESE ITEMS AS REQUIRED BY CODE.
- L. PROVIDE FIRE BOOTS AT FIRE WALL AND FLOOR PENETRATIONS WHEN REQUIRED BY CODE. FOR PVC PIPING AND OTHER MATERIALS THE FIRE INSPECTIONS DEPARTMENT MAY REQUIRE PROTECTION AROUND.
- M. CONTRACTOR TO PROVIDE AND INSTALL CLAMPING RINGS AND COLLARS FOR ALL FLOOR DRAINS, FLOOR SINKS, FLOOR CLEANOUTS, AND ANY OTHER PLUMBING FLOOR PENETRATIONS. MAKE WATER TIGHT CONNECTION WITH WATERPROOFING MEMBRANE
- N. THE INTENT OF THE DRAWING HEREIN IS TO REPRESENT A COMPLETE WORKING SYSTEM. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL COMPONENTS NECESSARY TO PROVIDE A COMPLETE WORKING AND CODE COMPLIANT SYSTEM WHETHER SHOWN OR NOT SHOWN ON THE DRAWINGS.

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	WASTE	VENT	CW	HW	DESCRIPTION / REMARKS
HWC	ACCESSIBLE WATER CLOSET	3"	3"	1/2"	---	PENAL-WARE 1680 SERIES SIPHON JET TOILET, OFF FLOOR. MODEL 168-W-1-1.28-FVBO-PFS-ADA. INCLUDED MOUNTING HARDWARE FOR 8" BLOCK WALL. PUNCHED FOR SEAT. BRADLEY S45-2308 ELONGATED OPEN FRONT BLACK SEAT. HANDICAP HEIGHT, TOP OF SEAT AT 17-1/2" AFF. CONCEALED INSTALLATION OF SLOAN REGAL 152 ESS 1.6 GPM, ROUGH BRASS FINISH, SINGLE FLUSH, 2-10.75 L DIMENSION, ELECTRICAL OVERRIDE, HARDWIRED, SENSOR-OPERATED. PROVIDE ALL NECESSARY INSTALLATION COMPONENTS PER MANUFACTURER INSTALLATION GUIDE / LOCAL, STATE AND FEDERAL CODES.
WC	WATER CLOSET	3"	3"	1/2"	---	PENAL-WARE 1680 SERIES SIPHON JET TOILET, OFF FLOOR. MODEL 168-W-1-1.28-FVBO-PFS. INCLUDED MOUNTING HARDWARE FOR 8" BLOCK WALL. PUNCHED FOR SEAT. BRADLEY S45-2308 ELONGATED OPEN FRONT BLACK SEAT. STANDARD HEIGHT, TOP OF SEAT AT 15-1/2" AFF. CONCEALED INSTALLATION OF SLOAN REGAL 152 ESS 1.6 GPM 1.6 GPF, ROUGH BRASS FINISH, SINGLE FLUSH, 2-10.75 L DIMENSION, ELECTRICAL OVERRIDE, HARDWIRED, SENSOR-OPERATED. PROVIDE ALL NECESSARY INSTALLATION COMPONENTS PER MANUFACTURER INSTALLATION GUIDE / LOCAL, STATE AND FEDERAL CODES.
LAV	LAVATORY WALL HUNG	1-1/2"	1-1/2"	1/2"	1/2"	PENAL-WARE 1652LRB 18" LAVATORY WITH LAVY RECTANGULAR BOWL. ADA COMPLIANT. CONCRETE BLOCK MOUNTING. MODEL 1652LRB-1-DMS-H1-DF-SW. PROVIDE ALL NECESSARY INSTALLATION COMPONENTS PER MANUFACTURER INSTALLATION GUIDE / LOCAL, STATE AND FEDERAL CODES. CHICAGO FAUCET MWP FAUCETS 333-665PSHPAABCP. DECK-MOUNTED METERING SINK FAUCET, SINGLE-HOLE, SINGLE-SUPPLY.
FD	FLOOR DRAIN	3"	2"	---	---	JOSAM 30003-A-55 CAST IRON DRAIN WITH SATIN NIKOLLOY STRAINER, CAST IRON FLASHING COLLAR. INSTALL DEEP SEAL TRAP.
DF	DRINKING FOUNTAIN	1-1/2"	1-1/2"	1/2"	1/2"	HAWS MODEL 1119FRP VANDAL-RESISTANT WALL MOUNTED BARRIER-FREE FREEZE RESISTANT DRINKING FOUNTAIN AND BOTTLE FILLER SHALL INCLUDE DUAL 18 GAUGE TYPE 304 STAINLESS STEEL SATIN NISH BASINS, 14 GAUGE TYPE 304 STAINLESS STEEL BOTTLE FILLER BRACKET, POLISHED CHROME-PLATED BRASS VANDAL RESISTANT BUBBLER HEADS, 1 GPM (3.78 L) LAMINAR FLOW BOTTLE FILLER, POLISHED CHROME-PLATED BRASS PUSH-BUTTONS WHICH OPERATE PNEUMATIC VALVES HOUSED IN INSULATED CABINETS, INSTALLED ON THE INSIDE WALL WHERE ROOM TEMPERATURES DO NOT DROP BELOW 50° F (10° C). SELF-DRAINING WATER LINES PROTECT THE UNIT FROM FREEZING, POLISHED CHROME-PLATED BRASS VANDAL-RESISTANT WASTE STRAINERS, STAINLESS STEEL SATIN NISH BACK PANELS, HIGH AND LOW FOUNTAIN MOUNTING LEVELS, AND 1-1/4" O.D. WASTE PIPES. THE BOTTLE FILLER REQUIRES A MOUNTING PLATE; EITHER THE HAWS MODEL 6700 IN-WALL OR THE 6700R ON-WALL SUPPORT PLATE. PROVIDE ALL SUPPLEMENTARY COMPONENTS FOR COMPLETE, OPERABLE AND CODE COMPLIANT INSTALLATION.
WCO	WALL CLEANOUT	PLAN	---	---	---	ZURN 1445. FURNISH W/POLISHED BRONZE, SQUARE ACCESS COVER AND FRAME.
FCO	FLOOR CLEANOUT	PLAN	---	---	---	ZURN Z1400-SZ 'LEVEL-TROL' SQUARE ADJUSTABLE LEVELING FLOOR CLEANOUT ADJUSTABLE HOUSING, NICKEL BRONZE TOP.
TP	TRAP PRIMER	---	---	1/2"	---	PRECISION PLUMBING PRODUCTS TRAP PRIMER. BRONZE CONSTRUCTION WITH VACUUM PORTS. ADJUSTABLE WITH 1/2" COPPER TYPE L TO RECEPTOR.
WHA	WATER HAMMER ARRESTOR	---	---	PLAN	PLAN	J.R. SMITH SERIES HYDROTROL, STAINLESS STEEL CONSTRUCTION.
WH	INSTA-HOT ELECTRIC	---	---	3/4"	3/4"	STEIBEL ELTRON INSTA-HOT DHC-E 8/10. 240 VOLT SINGLE PHASE 2 POLE. 7.2KW. 30 AMP LOAD ON 40 AMP BREAKER (HACR) 49F RISE AT 1.0 GPM FLOW. INSTALL WATTS LFUSG-B TEMPERING VALVE TO ENSURE MAXIMUM TEMPERATURE OF 109F AT FAUCET.
FWH	FREEZELESS WALL HYDRANT	---	---	3/4"	---	WOODFORD ANTI-SIPHON FREEZELESS WALL HYDRANT MODEL B-65. VACUUM BREAKER, ANTI-SIPHON, FLUSH MOUNT WALL BOX WITH DOR. BRONZE FINISH.



01 SANITARY SEWER PLAN

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



REVISIONS:



PROFESSIONAL SEAL



ISSUE DATE:

DECEMBER 9, 2024

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SHEET NAME:

SANITARY SEWER PLAN AND ISOMETRIC

SHEET NUMBER:

P1.0

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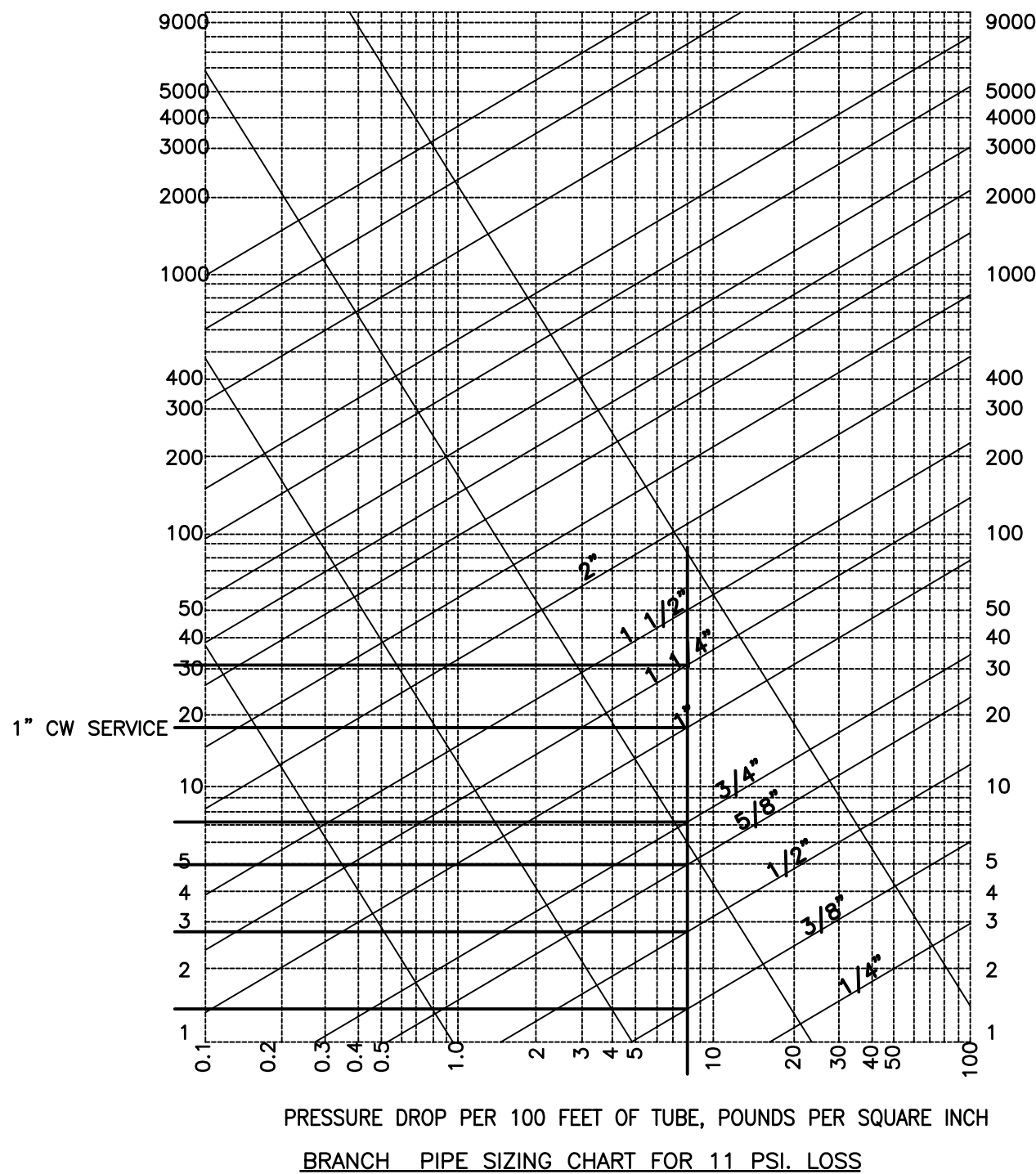
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DOMESTIC WATER PLAN

SHEET NUMBER:

P2.0

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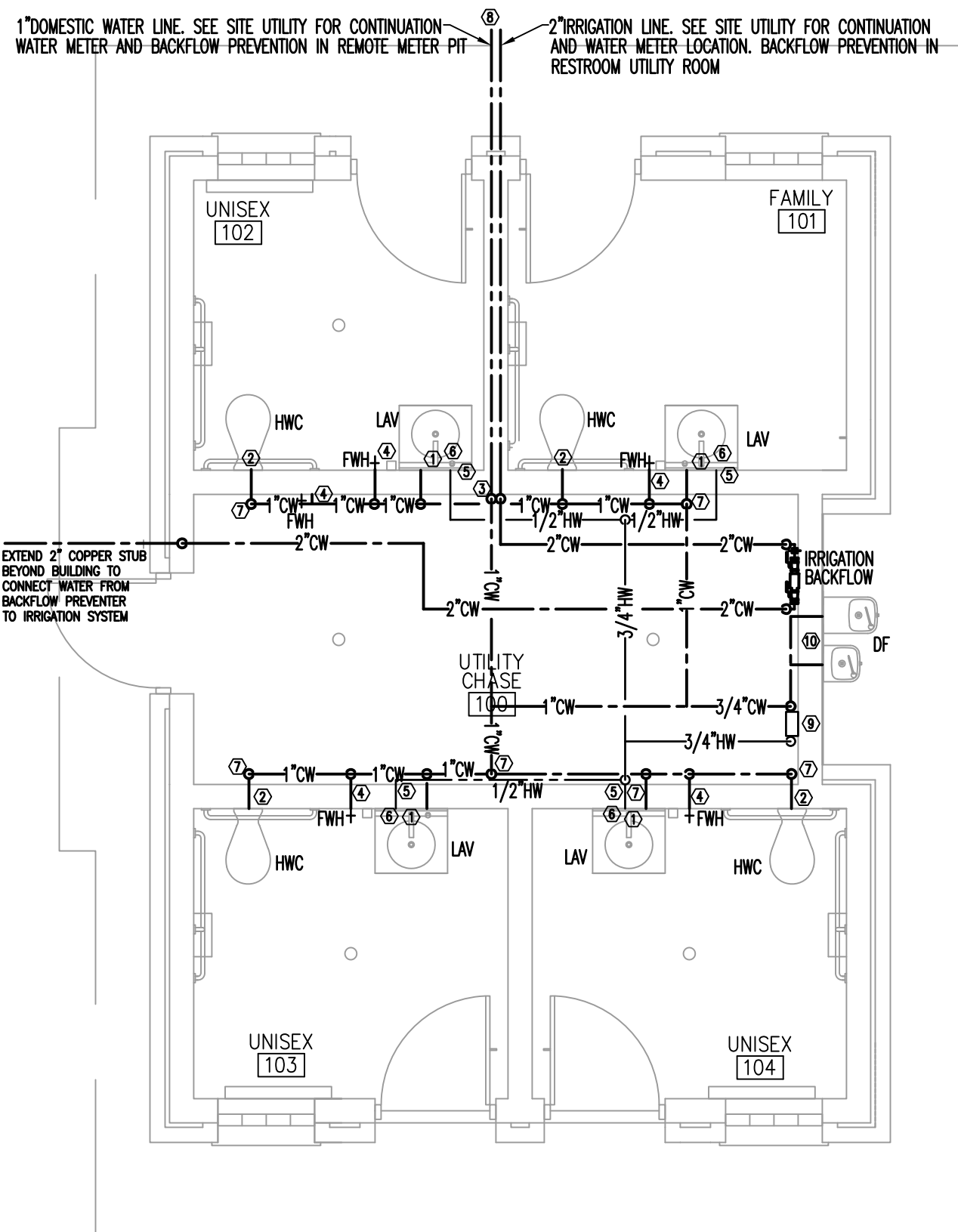
WATER SUPPLY CALCULATIONS

FIXTURE	QUANTITY	FIXTURE UNITS	FIXTURE UNITS
LAVATORY	4	1.0	4.0
WATER CLOSET	4	5.0	20.0
HOSE BIBB	5	2.5	12.5
		WATER FIXTURE UNITS	36.5
		GALLONS PER MINUTE	25.0
1" SERVICE LINE PROVIDES 22 GALLONS PER MINUTE			
PIPE LENGTH TAP TO METER		350	FT
PIPE LENGTH METER TO LAST FIXTURE		50	FT
VERTICAL PIPE LENGTH TO HIGHEST FIXTURE		12	FT
TOTAL PIPE LENGTH		412	FT
FITTING LOSS (20%)		82	FT
TOTAL DEVELOPED LENGTH		494	FT
WATER PIPE SIZING CRITERIA:			
SUPPLY PRESSURE (ASSUME)(INSTALL PRV AS REQUIRED)		80	PSIG
FRICTION LOSS (PSI):			
BACK FLOW PREVENTER LOSS		12.00	PSI
METER LOSS		3.00	PSI
HIGHEST PRESS. REQ'D. AT FIXTURE		25.00	PSI
TOTAL OVERALL LOSSES		40.00	PSI
PRESSURE AVAILABLE FOR PIPING		40.0	PSI
40 PSI / 494 TD. X 100 = 8 PSI MAXIMUM PRESS. DROP ALLOWABLE/100 FT. OF PIPE			

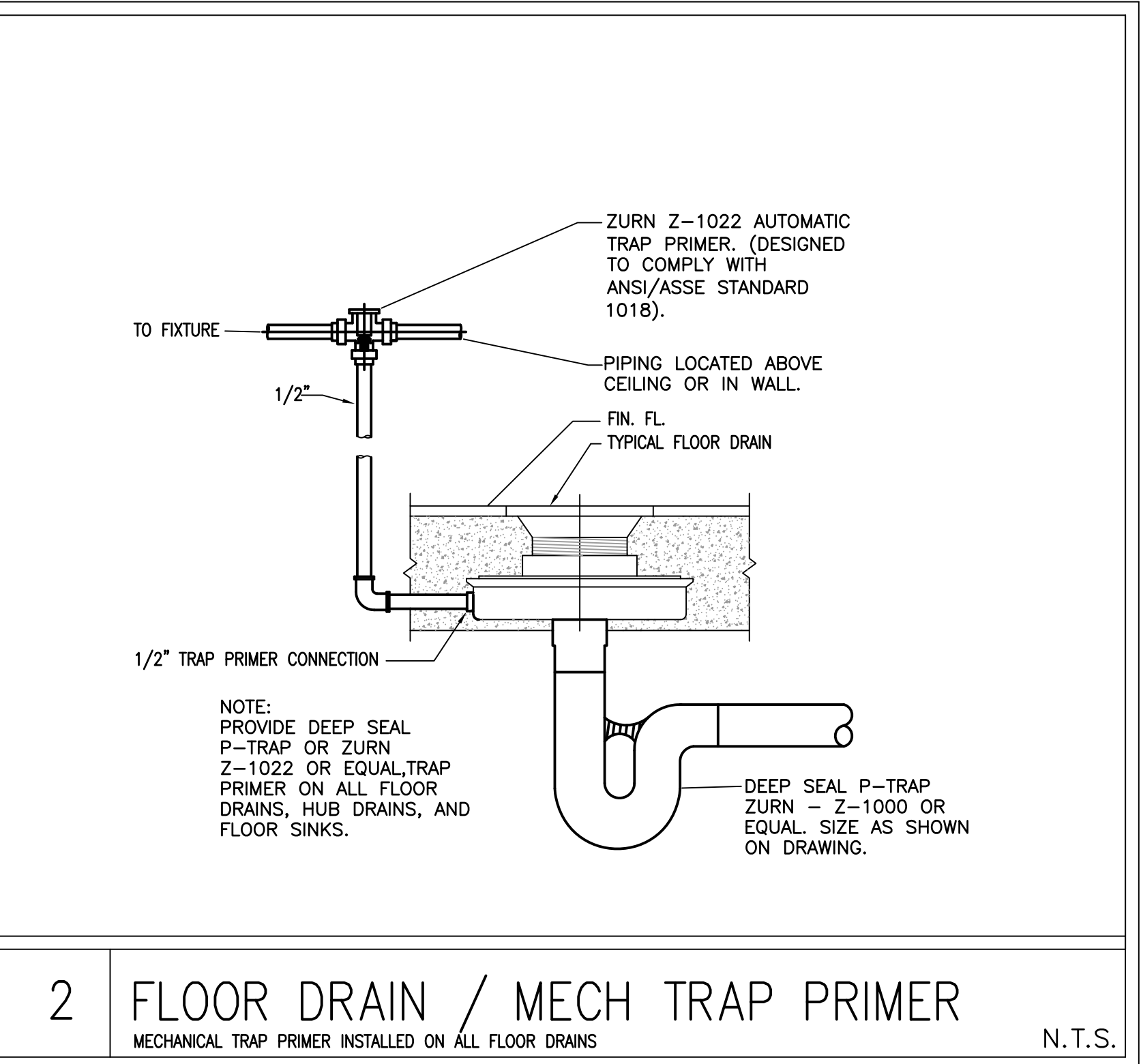
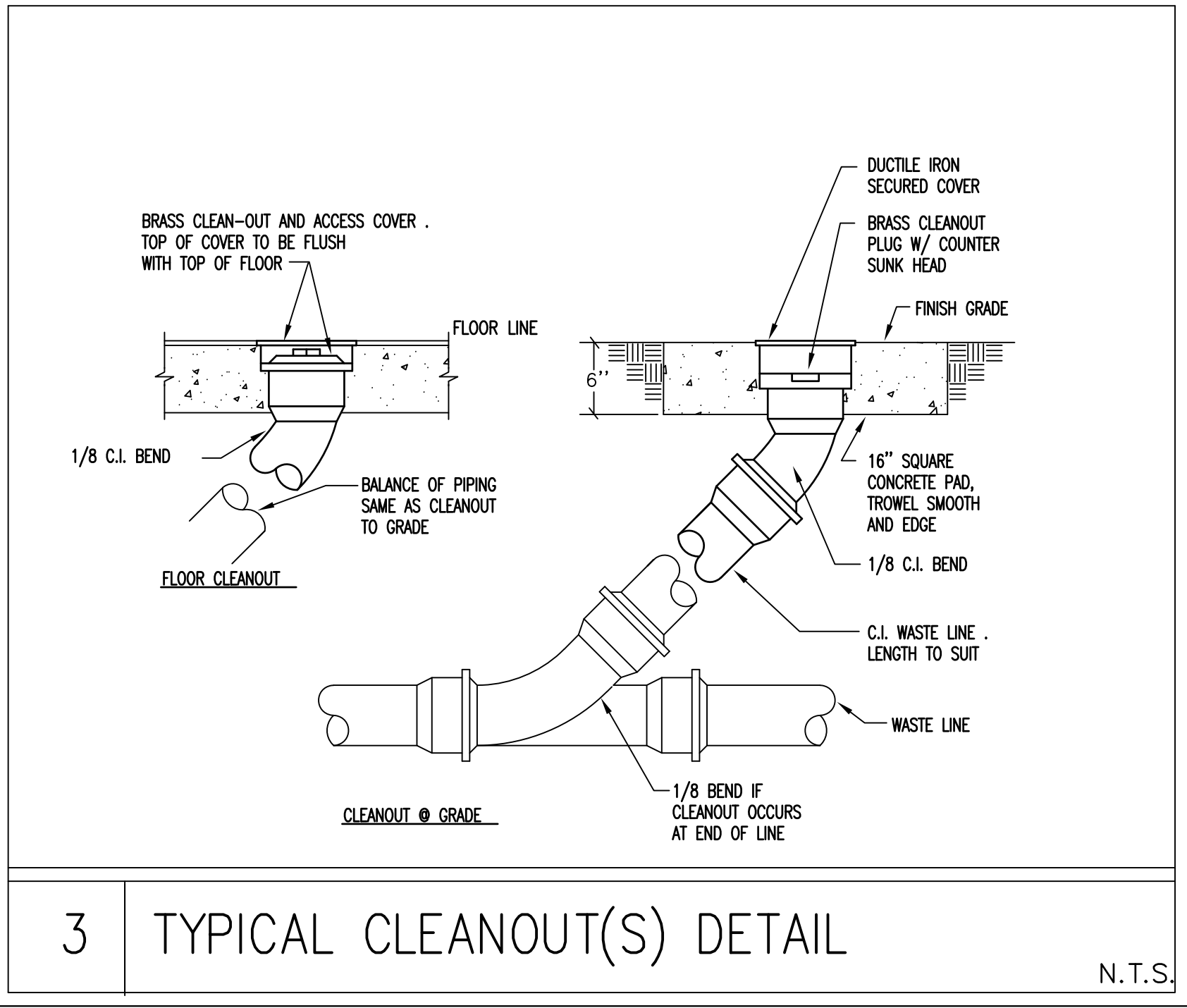
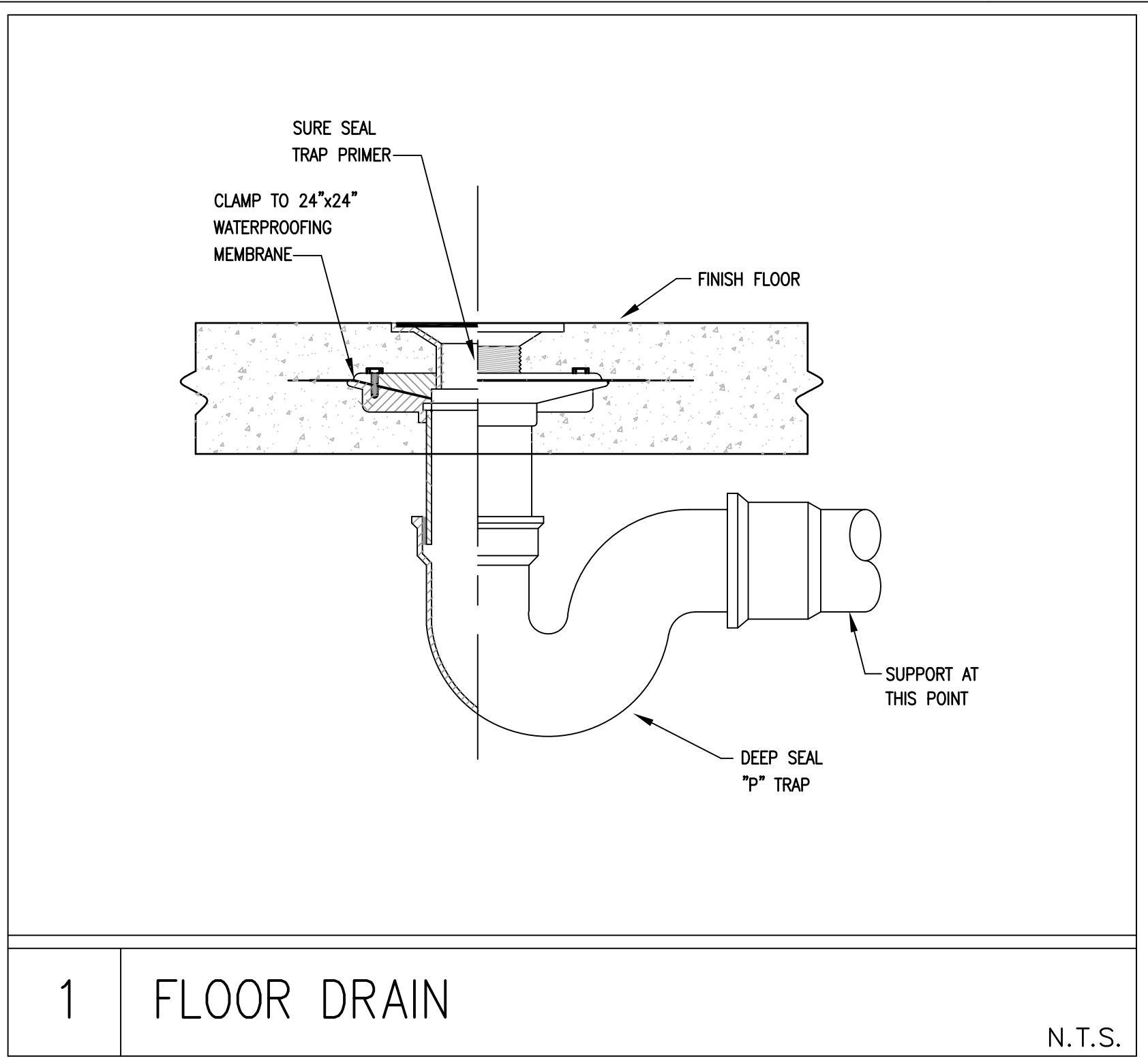
PLUMBING LEGEND	
DEFINITION	SYMBOL OR ABBREVIATION
DOMESTIC HOT WATER	---HW---
DOMESTIC COLD WATER	---C---
SANITARY WASTE	---SS---
RISER DOWN (ELBOW)	⊖
RISER UP (ELBOW)	⊕
TEE DOWN	⊖
BACKFLOW PREVENTER	⊖
CHECK VALVE	⊖
FLOOR DRAIN	⊖
FLOOR CLEANOUT	⊖

SHEET KEY NOTES

- 1/2" HOT AND COLD WATER TO FIXTURE
- 1" COLD WATER TO FIXTURE
- NEW 1" WATER SERVICE UP ON WALL. INSTALL SHUT-OFF AND RPZ BACKFLOW IN VERTICAL AT 48" AFF. CLEARLY LABEL AS "MAIN WATER SHUT OFF."
- 3/4" CW TO WALL HYDRANT
- WATTS FUSC-B THERMOSTATIC MIXING VALVE SET TO 109°F BEHIND HAND SINK IN SERVICE CHASE
- 1/2" HW FROM TO EACH LAV
- INSTALL WATER HAMMER ARRESTOR ON TOP OF FEED DOWN
- CONNECT TO EXISTING UNDERGROUND 1" WATER SERVICE FROM CITY/PUBLIC WORKS. SEE SITE UTILITY PLAN
- 3/4" HACW DOWN TO INSTAHOT.
- 1/2" CW TO DRINKING FOUNTAIN. SEE MANUFACTURER'S INSTALLATION MANUAL.



01 DOMESTIC WATER PLAN
SCALE: 3/8" = 1'-0"



PLUMBING SPECIFICATIONS

DIVISION 15 – MECHANICAL / PLUMBING

TABLE OF CONTENTS

SECTION	
15010	SPECIAL REQUIREMENTS FOR MECHANICAL PLUMBING
15400	PLUMBING
15410	PLUMBING PIPING
15440	PLUMBING FIXTURES

SECTION 15010 – SPECIAL REQUIREMENTS FOR MECHANICAL PLUMBING

PART 1.00 – GENERAL

1.01 REFERENCES:

- A. THE GENERAL CONDITIONS AND SPECIAL CONDITIONS ARE A PART OF THIS SECTION.
- B. WHERE ITEMS OF THE GENERAL CONDITIONS AND SPECIAL CONDITIONS ARE REPEATED IN THIS SECTION OF THE SPECIFICATIONS, IT IS MERELY INTENDED TO QUALIFY OR TO CALL ATTENTION TO THEM. IT IS NOT INTENDED THAT ANY OTHER PART OF THE GENERAL CONDITIONS SHALL BE ASSUMED TO BE OMITTED IF NOT REPEATED HEREIN.
- C. THIS SECTION APPLIES EQUALLY AND SPECIFICALLY TO ALL CONTRACTORS SUPPLYING LABOR AND/OR EQUIPMENT AND/OR MATERIALS AS REQUIRED UNDER EACH SECTION OF THIS DIVISION.

1.02 INTENT:

- A. IT IS THE INTENTION OF THE SPECIFICATIONS AND DRAWINGS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION, ANY APPARATUS, APPLANCE, MATERIAL OR WORK NOT SHOWN ON THE DRAWINGS, BUT MENTIONED IN THE SPECIFICATIONS OR VICE-VERSA, OR ANY INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE WORK COMPLETE AND PERFECT IN ALL RESPECT AND READY FOR OPERATION, EVEN IF NOT PARTIALLY SPECIFIED, SHALL BE FINISHED, DELIVERED AND INSTALLED UNDER THEIR RESPECTIVE DIVISION WITHOUT ADDITIONAL EXPENSE TO THE OWNER.
- B. MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR THE PROPER INSTALLATION AND OPERATION, SHALL BE INCLUDED IN THE WORK AS THOUGH THEY ARE HEREAFTER SPECIFIED OR SHOWN.
- C. WORK UNDER EACH SECTION SHALL INCLUDE GIVING WRITTEN NOTICE TO THE OWNER OF ANY MATERIALS OR APPARATUS BELIEVED INADEQUATE OR UNSUITABLE, IN VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION, AND NECESSARY ITEMS OF NOTICE, IT IS MUTUALLY AGREED THAT WORK UNDER EACH DIVISION HAS INCLUDED THE COST OF ALL REQUIRED ITEMS FOR THE APPROVED SATISFACTORY FUNCTIONING OF THE ENTIRE SYSTEM WITHOUT EXTRA COMPENSATION.

1.03 DRAWINGS:

- A. DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT, DO NOT SCALE THE DRAWINGS. CONSULT THE DESIGNER. DRAWINGS AND DETAILS EXACT LOCATION OF FIXTURES AND EQUIPMENT, WHERE SAME ARE NOT DEFINITELY LOCATED, OBTAIN THIS INFORMATION FROM THE DESIGNER.
- B. WORK UNDER EACH SECTION SHALL CLOSELY FOLLOW DRAWINGS IN LAYOUT OF WORK AND CHECK DRAWINGS OF OTHER DIVISIONS TO VERIFY SPACES IN WHICH WORK WILL BE INSTALLED. MAINTAIN MAXIMUM HEADROOM AND WHERE SPACE CONDITIONS APPEAR INADEQUATE, ENGINEER SHALL BE NOTIFIED BEFORE PROCEEDING WITH INSTALLATIONS.
- C. ENGINEER MAY, WITHOUT EXTRA CHARGE, MAKE REASONABLE MODIFICATIONS IN THE LAYOUT AS NEEDED TO PREVENT CONFLICT WITH WORK OF OTHER TRADES OR FOR PROPER EXECUTION OF THE WORK.
- D. WHERE VARIANCES OCCUR BETWEEN THE DRAWINGS AND SPECIFICATIONS OR WITHIN EITHER OF THE DOCUMENTS, THE ITEM OR ARRANGEMENT OF BETTER QUALITY, OR HIGHER COST, SHALL BE INCLUDED IN THE CONTRACT PRICE. THE ENGINEER SHALL DECIDE ON THE ITEM AND THE MANNER IN WHICH THE WORK SHALL BE INSTALLED.

1.04 SURVEYS AND MEASUREMENTS:

- A. BEFORE SUBMITTING TO HIS BID, THE CONTRACTOR SHALL VISIT THE SITE, AND THE EXISTING BUILDING AND SHALL BECOME THOROUGHLY FAMILIAR WITH ALL CONDITIONS UNDER WHICH HIS WORK WILL BE INSTALLED, AS HE WILL BE HELD RESPONSIBLE FOR ANY ASSUMPTIONS HE MAKES OR ANY OMISSIONS OR ERRORS HE MAKES AS A RESULT OF HIS FAILURE TO BECOME FAMILIAR WITH THE SITE, THE EXISTING BUILDING AND THE CONTRACT DOCUMENTS.
- B. THE CONTRACTOR SHALL BASE ALL MEASUREMENTS, BOTH HORIZONTAL AND VERTICAL FROM ESTABLISHED BENCH MARKS. ALL WORK SHALL AGREE WITH THESE ESTABLISHED LINES AND LEVELS. VERIFY ALL MEASUREMENTS AT SITE AND CHECK THE CORRECTNESS OF SAME AS RELATED TO THE WORK.
- C. SHOULD THE CONTRACTOR DISCOVER ANY DISCREPANCY BETWEEN ACTUAL MEASUREMENTS AND THOSE INDICATED, WHICH PREVENTS FOLLOWING GOOD PRACTICE OR THE INTENT OF THE DRAWINGS AND SPECIFICATIONS, HE SHALL NOTIFY THE ENGINEER AND SHALL NOT PROCEED WITH HIS WORK UNTIL HE HAS RECEIVED INSTRUCTIONS FROM THE ENGINEER.

1.05 CODES AND STANDARDS:

- A. THE STANDARDS AND CODES LISTED BELOW SHALL APPLY TO ALL MECHANICAL WORK, WHERE STANDARDS OR CODES ARE MENTIONED IN THESE SPECIFICATIONS, THE LATEST EDITION OR REVISION SHALL BE FOLLOWED.
1. ANSI A13.1 – SCHEME FOR THE IDENTIFICATION OF PIPING SYSTEM
 2. ANSI A40.8 – NATIONAL PLUMBING CODES
 3. ANSI C 1 – NATIONAL ELECTRIC CODE (NFPA 70)
 4. ANSI C50 – ROTATING ELECTRICAL MACHINERY
 5. ANSI C51.1 – CONSTRUCTION AND GUIDE FOR SELECTION, INSTALLATION F
 6. ANSI C52.1 – MOTORS AND GENERATORS (NEMA MG 1)
- B. STATE AND LOCAL CODES SHALL APPLY AS LIST ON COVER SHEET.

- C. THE FOLLOWING ABBREVIATIONS ARE USED WITHIN THIS SECTION OF THE SPECIFICATIONS:

ACPA – AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
ACMA – AIR MOVING AND CONDITIONING ASSOCIATION
ANSI – AMERICAN NATIONAL STANDARDS INSTITUTE
API – AMERICAN PETROLEUM INSTITUTE
ARI – AIR CONDITIONING AND REFRIGERATION INSTITUTE
ASHRAE – AMERICAN SOCIETY OF HEATING REFRIGERATION AND AIR CONDITIONING ENGINEERS
ASME – AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASTM – AMERICAN SOCIETY OF TESTING AND MATERIALS
AWS – AMERICAN WELDING SOCIETY
AWWA – AMERICAN WATER WORKS ASSOCIATION
BOCA – BUILDINGS OFFICIALS AND CODE ADMINISTRATORS INTERNATIONAL, INC.
CSA – COMPRESSED GAS ASSOCIATION
CSPI – CAST IRON SOIL PIPE INSTITUTE
EJMA – EXPANSION JOINT MANUFACTURERS ASSOCIATION
EPA – ENVIRONMENTAL PROTECTION AGENCY
FSSC – FEDERAL SPECIFICATION
IBR – INSTITUTE OF BOILER AND RADIATOR MANUFACTURERS
IEEE – INSTITUTE OF ELECTRICAL AND ELECTRICAL ENGINEERS
NEMA – NATIONAL ELECTRICAL MANUFACTURER ASSOCIATION
NFPA – NATIONAL FIRE PROTECTION ASSOCIATION
NOFI – NATIONAL OIL FUEL INSTITUTE
NSPC – NATIONAL STANDARD PLUMBING CODE
OSHA – OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PDI – PLUMBING AND DRAINAGE INSTITUTE
SMAQWA – SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
ULL – UNDERWRITERS' LABORATORIES

1.06 PERMITS AND FEES:

- A. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS AND PAY ALL GOVERNMENT SALES TAXES AND FEES WHERE APPLICABLE, AND OTHER COSTS, INCLUDING UTILITY CONNECTIONS OR EXTENSIONS, IN CONNECTION WITH HIS WORK. FILE ALL NECESSARY APPROVALS OF ALL GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION, OBTAIN ALL REQUIRED CERTIFICATES OF INSPECTION FOR HIS WORK AND DELIVER A COPY TO THE ENGINEER BEFORE REQUEST FOR ACCEPTANCE AND FINAL PAYMENT FOR THE WORK.
- B. THE CONTRACTOR SHALL INCLUDE IN THE WORK, WITHOUT EXTRA COST TO THE OWNER, ANY LABOR, MATERIALS, SERVICES, APPARATUS, DRAWINGS, IN ORDER TO COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES RULES AND REGULATIONS, WHETHER OR NOT SHOWN ON DRAWINGS AND/OR SPECIFIED.
- C. ALL MATERIALS FURNISHED AND ALL WORK INSTALLED SHALL COMPLY WITH RULES AND RECOMMENDATIONS OF THE NATIONAL FIRE PROTECTION ASSOCIATION, WITH THE REQUIREMENTS OF THE LOCAL UTILITY COMPANIES, WITH THE RECOMMENDATIONS OF THE INSURING AUTHORITY, AND WITH THE REQUIREMENTS OF ALL GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION.

1.07 COORDINATION WITH OTHER DIVISIONS:

- A. ALL WORK SHALL BE CARRIED OUT IN CONJUNCTION WITH OTHER TRADES AND FULL COOPERATION SHALL BE IN ORDER THAT ALL WORK MAY PROCEED WITH A MINIMUM OF DELAY AND INTERFERENCE. PARTICULAR EMPHASIS PLACED ON TIMELY INSTALLATION OF MAJOR APPARATUS AND FURNISHING OTHER CONTRACTORS, ESPECIALLY THE GENERAL CONTRACTOR, WITH INFORMATION AS TO OPENINGS, CHASES, EQUIPMENT LOCATIONS, PANELS WIRING REQUIRED BY OTHER TRADES.
- B. THE CONTRACTOR IS REQUIRED TO EXAMINE ALL OF THE PROJECT DRAWING AND MUTUALLY ARRANGE WORK SO AS TO AVOID INTERFERENCE. DUCTWORK, HEATING PIPES AND DRAINAGE LINES TAKE PRECEDENCE OVER WATER, GAS AND ELECTRICAL CONDUTIS.
- C. WHERE THE WORK OF THE CONTRACTOR WILL BE INSTALLED IN CLOSE PROXIMITY TO, OR WILL INTERFERE WITH WORK OF OTHER TRADES, HE SHALL ASSIST IN WORKING OUT SPACE CONDITIONS TO MAKE A SATISFACTORY ADJUSTMENT. IF SO DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL PREPARE COMPOSITE WORKING DRAWINGS AND SECTIONS AT A SCALE NOT LESS THAN 3/8" = 1' – 0", CLEARLY SHOWING HOW HIS WORK IS TO BE INSTALLED IN RELATION TO THE WORK OF OTHER TRADES. IF THE CONTRACTOR INSTALLED HIS WORK BEFORE COORDINATING WITH OTHER TRADES, HE SHALL MAKE NECESSARY CHANGES IN HIS WORK TO CORRECT THE CONDITION WITHOUT EXTRA CHARGE. CONTRACTORS SHALL COORDINATE RADIATION COVERS WITH CONVENIENCE OUTLETS TO AVOID CONFLICTS.

1.08 APPROVALS:

- A. THE MATERIALS, WORKMANSHIP, DESIGN AND ARRANGEMENT OF ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
- B. WITHIN THIRTY (30) DAYS AFTER THE ACCEPTANCE OF BIDS, THE MECHANICAL CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL A LIST OF MANUFACTURERS OF EQUIPMENT PROPOSED FOR THE WORK UNDER THE MECHANICAL SECTION. THE INTENT TO USE THE EXACT MAKES SPECIFIED DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF SUBMITTING SUCH A LIST.
- C. WHERE ANY SPECIFIC MATERIAL, PROCESS OR METHOD OF CONSTRUCTION, OR MANUFACTURED ARTICLE IS SPECIFIED BY NAME OR BY REFERENCE TO THE CATALOGUE NUMBER OF A MANUFACTURER, THE SPECIFICATIONS ARE TO BE USED AS A GUIDE AND ARE NOT INTENDED TO TAKE PRECEDENCE OVER THE DUTY AND PERFORMANCE SPECIFIED WITH THE SPECIFIC CHARACTERISTICS OF THE EQUIPMENT OFFERED FOR APPROVAL. EQUIPMENT CHARACTERISTICS ARE TO BE USED AS MANDATORY REQUIREMENTS WHERE CONTRACTOR PROPOSES TO USE AN APPROVED EQUAL.
- D. ALL COMPONENT PARTS OF EACH ITEM OF EQUIPMENT OR DEVICE SHALL BEAR THE MANUFACTURER'S NAMEPLATE, GIVING NAME OF MANUFACTURER, DESCRIPTION, SIZE, TYPE, SERIAL OR MODEL NUMBER, AND OTHER CHARACTERISTICS, ETC., IN ORDER TO FACILITATE MAINTENANCE OR REPLACEMENT. THE NAMEPLATE OF SUBCONTRACTOR OR DISTRIBUTOR WILL NOT BE ACCEPTABLE.
- E. IF MATERIAL OR EQUIPMENT IS INSTALLED BEFORE IT IS APPROVED, THE CONTRACTOR SHALL BE LIABLE FOR ITS REMOVAL AND REPLACEMENT AT NO EXTRA CHARGE TO THE OWNER IF, IN THE OPINION OF THE ENGINEER, THE MATERIAL OR EQUIPMENT DOES NOT MEET THE INTENT OF THE DRAWINGS AND SPECIFICATIONS.

1.09 EQUIPMENT DETAILATIONS:

- A. BIDS SHALL BE BASED ON MATERIAL AND EQUIPMENT SPECIFIED, WHERE MORE THAN ONE MANUFACTURER IS NAMED IN THE PLANS OR SPECIFICATIONS, EQUIPMENT OR MATERIALS SHALL BE EQUAL TO THE MODEL OR TYPE SPECIFIED, BUT MAY BE THE PRODUCT OF ANY OF THE MANUFACTURERS LISTED FOR THE PARTICULAR ITEM. IF IT IS DESIRED TO SUBSTITUTE THE PRODUCT OF A MANUFACTURER NOT SPECIFIED A PARTICULAR ITEM, THE MANUFACTURER AND ITEM TO BE SUBSTITUTED SHALL BE NAMED ON THE BID FORM TOGETHER WITH THE ADDITION OR DEDUCTION OF THE BASE BID. BASE BID SHALL BE BASED ON USING MANUFACTURER'S EQUIPMENT AS SPECIFIED.
- B. IN THESE SPECIFICATIONS AND ON THE ACCOMPANYING DRAWINGS, ONE OR MORE MAKES OF MATERIALS, APPARATUS OR APPLIANCE HAVE BEEN SPECIFIED FOR USE IN THIS INSTALLATION. THIS HAS BEEN DONE FOR CONVENIENCE IN FIXING THE STANDARD OF WORKMANSHIP, FINISH AND DESIGN REQUIRED FOR THIS WORKMANSHIP, FINISH AND DESIGN AND THE GUARANTEED PERFORMANCE OF ANY MATERIALS, APPARATUS OR APPLIANCE WHICH THE CONTRACTOR DESIRES TO SUBSTITUTE FOR THOSE MENTIONED STANDARDS. WHERE NO SPECIFIC MAKE OF MATERIAL, APPARATUS OR APPLIANCE IS MENTIONED, ANY FIRST CLASS PRODUCT MADE BY REPUTABLE MANUFACTURER MAY BE USED, PROVIDING IT CONFORMS TO THE REQUIREMENTS OF THESE SPECIFICATIONS, IN THE OPINION OF AND MEETS THE APPROVAL OF THE ENGINEER. WHERE TWO OR MORE NAMES ARE GIVEN AS EQUALS, THE CONTRACTOR MUST USE ONE OF THE NAMED EQUALS. WHERE ONE NAME ONLY IS USED AND IS FOLLOWED BY THE WORD "OR APPROVED EQUAL," THE CONTRACTOR MUST USE THE ITEM NAMED, BUT HE MAY APPLY FOR SUBSTITUTION THROUGH THE PRESCRIBED MANNER.
- C. WHERE THE CONTRACTOR PROPOSES TO USE AN ITEM OF EQUIPMENT OTHER THAN SPECIFIED OF DETAILED ON THE DRAWINGS WHICH REQUIRES ANY REDESIGN OF THE STRUCTURE, PARTITIONS, FOUNDATIONS WIRING, OR ANY OTHER PART OF THE MECHANICAL, ELECTRICAL OR DESIGNERURAL LAYOUT, ALL SUCH REDESIGN AND ALL NEW DRAWINGS AND DETAILING REQUIRED THEREFORE SHALL WITH THE APPROVAL OF THE ENGINEER, BE PREPARED UNDER WORK OF THE RESPECTIVE SECTION AT NO COST TO THE OWNER.
- D. WHERE SUCH APPROVED DEVIATION REQUIRES A DIFFERENT QUANTITY AND ARRANGEMENT OF DUCTWORK, PIPING, WIRING, CONDUIT AND EQUIPMENT FROM THAT SPECIFIED OR INDICATED ON THE DRAWINGS, WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR SHALL FURNISH AND INSTALL ANY SUCH DUCTWORK, PIPING, STRUCTURAL SUPPORTS, INSULATION, CONTROLLERS, MOTORS, STARTERS, AND ANY OTHER ADDITIONAL EQUIPMENT REQUIRED BY THE SYSTEM AT NO ADDITIONAL COST TO THE OWNER.

1.10 MANUFACTURER'S IDENTIFICATION:

- A. MANUFACTURER'S NAMEPLATE, NAME OR TRADEMARK AND ADDRESS SHALL BE ATTACHED PERMANENTLY TO ALL EQUIPMENT AND MATERIAL FURNISHED UNDER THIS DIVISION. THE NAMEPLATE OF A CONTRACTOR OR DISTRIBUTOR SHALL NOT BE ACCEPTABLE.

1.11 SHOP DRAWINGS:

- A. CONTRACTOR SHALL SUBMIT FOR REVIEW, DETAILED SHOP DRAWINGS OF ALL EQUIPMENT AND ALL MATERIAL REQUIRED TO COMPLETE THE PROJECT, NO MATERIAL OR EQUIPMENT MAY BE DELIVERED TO THE SITE OR INSTALLED UNTIL THE CONTRACTOR HAS IN HIS POSSESSION AN APPROVED SHOP DRAWING FOR THE PARTICULAR MATERIAL OR EQUIPMENT.
- B. SHOP DRAWINGS SHALL BE SUBMITTED IN ACCORDANCE WITH THE REQUIREMENT OUTLINED IN THE GENERAL CONDITIONS OF THESE SPECIFICATIONS.
- C. FAILURE OF THE CONTRACTOR TO SUBMIT SHOP DRAWINGS IN AMPLE TIME SHALL NOT ENTITLE HIM TO AN EXTENSION OF CONTRACT OR NO CLAIM FOR EXTENSION BY REASON OF SUCH DELAY TO BE ALLOWED.
- D. CATALOGUES, PAMPHLETS OR OTHER DOCUMENTS SUBMITTED TO DESCRIBED ITEMS ON WHICH APPROVAL IS REQUESTED, SHALL BE SPECIFIC AND IDENTIFICATION IN CATALOGUE, PAMPHLET, ETC. OF ITEM SUBMITTED SHALL BE CLEARLY MADE IN INK. DATA OF GENERAL MATERIAL WILL NOT BE ACCEPTED.
- E. THE CONTRACTOR SHALL FURNISH ALL NECESSARY TEMPLATES, PATTERNS, ETC. FOR INSTALLATION WORK AND FOR THE PURPOSE OF MAKING ADJOINING WORK CONFORM, FURNISH SETTING PLANS AND SHOP DETAILS TO OTHER TRADES AS REQUIRED.

- F. APPROVAL, RENDERED ON SHOP DRAWINGS SHALL NOT BE CONSIDERED AS A GUARANTEE OF MEASUREMENTS OR BUILDING CONDITIONS. WHERE DRAWINGS ARE APPROVED, APPROVAL DOES NOT MEAN THAT DRAWINGS HAVE BEEN CHECKED IN DETAIL, SAID APPROVAL DOES NOT IN ANY WAY RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITY, OR NECESSITY IF FURNISHING MATERIAL OR PERFORMING WORK AS REQUIRED BY THE CONTRACT DRAWINGS AND SPECIFICATIONS. VERIFY AVAILABLE SPACE PRIOR TO SUBMITTING SHOP DRAWINGS.
- G. APPROVAL OF SHOP DRAWINGS SHALL NOT APPLY TO QUANTITY NOR RELIEVE CONTRACTOR OF HIS RESPONSIBILITY TO COMPLY WITH INTENT OF DRAWINGS AND SPECIFICATIONS. APPROVAL OF SHOP DRAWINGS ARE FINAL AND NO FURTHER CHANGES WILL BE ALLOWED WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

1.12 MATERIAL AND WORKMANSHIP:

- A. ALL MATERIALS AND APPARATUS REQUIRED FOR THE WORK, EXCEPT AS SPECIFIED OTHERWISE, SHALL BE NEW, OF FIRST CLASS QUALITY AND SHALL BE FURNISHED, DELIVERED, CONNECTED AND FINISHED IN EVERY DETAIL AND SHALL BE SO SELECTED AND ARRANGED TO FIT PROPERLY INTO THE BUILDING SPACE. WHERE NO SPECIFIC KIND OF QUALITY OR MATERIAL IS GIVEN, A FIRST-CLASS STANDARD ARTICLE AS ACCEPTED BY THE ENGINEER, SHALL BE FURNISHED.
- B. THE CONTRACTOR SHALL FURNISH THE SERVICES OF AN EXPERIENCED SUPERINTENDENT WHO SHALL BE CONSTANTLY IN CHARGE OF THE INSTALLATION OF THE WORK, TOGETHER WITH ALL SKILLED WORKMEN, FITTERS, METAL WORKERS, WELDERS, HELPERS, AND LABOR REQUIRED TO UNLOAD, TRANSFER, ERECT, CONNECT-UP, ADJUST, START, OPERATE AND TEST EACH SYSTEM.
- C. UNLESS OTHERWISE SPECIFICALLY INDICATED ON THE PLANS OR SPECIFICATIONS, ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED WITH THE ACCEPTANCE OF THE ENGINEER IN ACCORDANCE RECOMMENDATIONS OF THE MANUFACTURER. THIS INCLUDES THE PERFORMANCE OF SUCH TESTS AS THE MANUFACTURER RECOMMENDS.

1.13 PROTECTION:

- A. WORK UNDER THIS SECTION SHALL INCLUDE PROTECTING THE WORK AND MATERIALS OF ALL OTHER SECTIONS FROM DAMAGE BY WORK OR WORKMEN, AND SHALL INCLUDE MAKING GOOD ALL DAMAGE US CAUSED.
- B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WORK AND EQUIPMENT UNTIL FINALLY INSPECTED, TESTED AND ACCEPTED; PROTECT WORK AGAINST THEFT, INJURY OR DAMAGE; AND CAREFULLY STORE MATERIAL AND EQUIPMENT RECEIVED ON SITE WHICH ARE NOT IMMEDIATELY INSTALLED. CLOSE OPEN ENDS OF WORK WITH TIGHT SHOW COVERS OR PLUGS DURING CONSTRUCTION TO PREVENT ENTRY OF OBSTRUCTING MATERIAL.
- C. WORK UNDER THIS SECTION, INCLUDES RECEIVING, UNLOADING, UNCRATING, STORING, PROTECTING, SETTING IN PLACE AND CONNECTING UP COMPLETELY OF EQUIPMENT SUPPLIED UNDER THIS SECTION. WORK UNDER THIS SECTION SHALL ALSO INCLUDE EXERCISING SPECIAL CARE IN HANDLING AND PROTECTING EQUIPMENT AND FIXTURES AND SHALL INCLUDE THE COST OF REPLACING ANY OF THE ABOVE EQUIPMENT AND FIXTURES WHICH MISSING OR DAMAGED BY REASON OF MISHANDLING OR FAILURE TO PROTECT ON THE PART OF THE CONTRACTOR.

1.14 SLEEVES, INSERTS AND ANCHOR BOLTS:

- A. THE CONTRACTOR SHALL PROVIDE, SET IN PLACE AND BE HELD RESPONSIBLE FOR THE LOCATION OF ALL SLEEVES, INSERTS, AND ANCHOR BOLTS REQUIRED FOR THEIR WORK. IN THE EVENT THAT FAILURE TO DO SO RESULTS CUTTING AND PATCHING OF FINISHED WORK, IT SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.
- B. ALL PIPES AND CONDUITS PASSING THROUGH FLOORS, WALLS, OR PARTITIONS, SHALL BE PROVIDED WITH SLEEVES HAVING AN INTERNAL DIAMETER 1 INCH LARGER THAN THE OUTSIDE DIAMETER OF THE PIPE, CONDUIT OR INSULATION, ENCLOSING PIPE OR CONDUIT.
- C. SLEEVES THROUGH OUTSIDE WALLS SHALL BE CAST IRON SLEEVES WITH IMMEDIATE INTEGRAL FLANGE. SLEEVES SHALL BE SET WITH ENDS FLUSH WITH EACH FACE OF WALL. THE SPACE BETWEEN SLEEVE AND PIPE SHALL BE PACKED WITH OAKUM TO WITH TWO (2) INCHES OF EACH FACE OF WALL. THE REMAINING SPACE SHALL BE PACKED AND MADE WATERTIGHT WITH A WATERPROOF COMPOUND.
- D. SLEEVES THROUGH CONCRETE FLOORS OR INTERIOR MASONRY WALLS SHALL BE SCHEDULE 40 BLACK STEEL PIPE, SST FLUSH WITH FINISHED FLOOR OR CEILING SURFACES, BUT EXTENDING TWO (2) INCHES ABOVE FINISHED FLOORS.
- E. SLEEVES THROUGH INTERIOR PARTITIONS SHALL BE 22 GAUGE GALVANIZED SHEET STEEL, SET FLUSH WITH FINISHED SURFACES OF PARTITIONS.
- F. INSERTS SHALL BE INDIVIDUAL OR STRIP TYPE OR PRESSED STEEL CONSTRUCTION WITH ACCOMMODATION FOR REMOVAL NUTS AND THREADED RODS UP TO 3/4" DIAMETER, PERMITTING LATERAL ADJUSTMENT. INDIVIDUAL INSERTS SHALL HAVE AN OPENING AT THE TOP TO ALLOW REINFORCING RODS UP TO 1/2" DIAMETER TO BE PASSED THROUGH THE INSERT BODY. STRIP INSERTS SHALL HAVE ATTACHED RODS HAVING HOOKED ENDS TO ALLOW FASTENING TO REINFORCING RODS. INSERTS SHALL BE AS MANUFACTURED BY CARPENTER AND PATTERSON, INC., GRINNEL CO., INC. OR APPROVED EQUAL.

1.15 NOT USED

1.33 RECORD DRAWINGS:

- A. MAINTAIN AT THE JOB SITE A RECORD SET OF MECHANICAL DRAWINGS ON WHICH CHANGES IN LOCATION OF EQUIPMENT, PIPING, DUCTS, VALVES, CLEANOUTS, PANELS AND MAJOR CONDUITS SHALL BE RECORDED. THESE SHALL BE CLEARLY MARKED ON A CLEAN SET OF SEPA AT THE COMPLETION OF WORK AND TURN OVER TO THE ENGINEER.

END OF SECTION 15010

DIVISION 15 – MECHANICAL PLUMBING

SECTION 15400 – PLUMBING

PART 1.00 – GENERAL PROVISION

1.01 THE CONTRACTOR FOR WORK UNDER THIS SECTION IF REFERRED TO THE:

- CONTRACT DRAWINGS, GENERAL CONDITIONS, CONTRACT SPECIFICATIONS, ALL OF WHICH ARE HEREBY MADE A PART OF THIS SECTION.

1.02 THE CONTRACTOR'S PARTICULAR ATTENTION IS DIRECTED TO THE "GENERAL:

- NOTES", AND THE REQUIREMENT TO STRICTLY COMPLY WITH ALL THE PROVISIONS OF SAME.

1.03 WORK INCLUDED:

- A. PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, SERVICES, ETC. NECESSARY OR REQUIRED FOR THE WORK OF THIS SECTION, AS INDICATED ON THE DRAWINGS, HEREIN SPECIFIED, AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. ITEMS OF WORK SHALL CONSIST GENERALLY OF, BUT NOT BE LIMITED TO THE FOLLOWING:
1. SANITARY PIPING ABOVE AND BELOW GRADE.
 2. SANITARY VENT PIPING.
 3. DOMESTIC HOT AND COLD WATER PIPING.
 4. NATURAL GAS PIPING (IF REQUIRED).
 5. ALL VALVES, FITTINGS AND DEVICES ASSOCIATED WITH PIPING SYSTEMS.
 6. PIPE INSULATION.
 7. WATER HEATER
 8. BACKFLOW PREVENTER.
 9. PLUMBING FIXTURES AND FAUCETS.
 10. STOP VALVES.
 11. FLOOR DRAINS.
 12. ROOF DRAINS (IF REQUIRED)
 13. DOMESTIC WATER SERVICE, BY OWNER/CITY
 14. CONNECTIONS TO EQUIPMENT FURNISHED BY OTHERS.
 15. CONDENSATE DRAINS.
 16. INDIRECT WASTE DRAINS.
 17. TESTING.
 18. FURNISHING AND SETTING OF ALL SLEEVES THROUGH THE FLOORS, ROOF AND WALL, WHERE REQUIRED INCLUDING WATERPROOFING AND FIREPROOF SEALING AND CAP FLASHING.
 19. NOT USED.

20. HARDWARE, SUCH AS INSERTS, BOLTS, ETC., ASSOCIATED WITH CONCRETE PAOS.
21. CUTTING ASSOCIATED WITH PLUMBING.
22. PRIME PAINTING, WHERE REQUIRED FOR PLUMBING EQUIPMENT AND INSTALLATION.

1.04 RELATED WORK OF OTHER SECTIONS:

- A. THE CONTRACTOR WILL BE REQUIRED TO COORDINATE THE RELATED WORK SECTIONS WITH THE WORK OF THIS SECTION AND BE RESPONSIBLE FOR THE TIMELY AND EXPEDITIOUS PERFORMANCE OF SAME. RELATED WORK SHALL INCLUDE BUT IS NOT NECESSARILY LIMITED TO THE FOLLOWING:
1. FINISHED PAINTING EXCEPT AS NOTED.
 2. ELECTRICAL POWER WIRING, AND SETTING OF STARTERS.
 3. GAS VENTS BY MECHANICAL CONTRACTOR.

1.05 VERIFYING CONDITIONS:

- A. EXAMINE ALL DRAWINGS COVERING THE WORK OF THIS SECTION AND REFER TO ALL OTHER DRAWINGS, INCLUDING DESIGNERURAL, MECHANICAL AND ELECTRICAL DRAWINGS, WHICH MAY AFFECT THE WORK OF THE SECTION OR REQUIRE COORDINATING WITH SAME.
- B. REPORT IN WRITING TO THE DESIGNER ANY AND ALL CONDITIONS WHICH MAY INTERFERE OR OTHERWISE AFFECT OR PREVENT THE PROPER EXECUTION AND COMPLETION OF THE WORK.

1.06 SUBMITTALS:

- A. SHOP DRAWINGS:
1. PRIOR TO PURCHASING ANY EQUIPMENT OR MATERIALS, A LIST OF THEIR MANUFACTURERS SHALL BE SUBMITTED FOR APPROVAL.
 2. PRIOR TO ASSEMBLING OR INSTALLING THE WORK, THE FOLLOWING SHALL BE SUBMITTED FOR APPROVAL:
 - a. PLUMBING FIXTURES & TRIM.
 - b. PIPE INSULATION.
 - c. FLOOR DRAINS
 - d. GAS VENT MATERIALS.
 - e. FLOOR SINKS
 - f. CLEANOUTS.
 3. DOCUMENTS WILL NOT BE ACCEPTED FOR APPROVAL UNLESS:
 - a. FIVE COPIES OF EACH ARE SUBMITTED.
 - b. ALL REQUIRED CERTIFICATES ARE SUBMITTED WITH APPROVAL.
 - c. ALL SUBMITTALS CLEARLY MARKED.

1.08 FEES, PERMITS AND CERTIFICATES:

- A. ALL FEES, PERMITS, TAXES OR CERTIFICATES REQUIRED BY GOVERNING BODIES OR ANY OTHER AGENCY AFFECTING THE WORK AS SPECIFIED HEREIN, OR REQUIRED FOR THE CERTIFICATE OF OCCUPANCY, SHALL BE OBTAINED AND PAID FOR BY THIS CONTRACTOR AS PART OF THE BASIC CONTRACT.

1.09 REMOVAL OF DEBRIS:

- A. THIS CONTRACTOR SHALL REMOVE FROM THE BUILDING ALL SURPLUS MATERIALS AND ALL DEBRIS CREATED BY HIM AND SHALL LEAVE THE WORK AREA IN A CLEAN CONDITION.

1.10 CUTTING AND PATCHING:

- A. CUTTING AND DRILLING: CONTRACTOR SHALL DO ALL CUTTING AND DRILLING OF WALLS, PARTITIONS, CEILING, FLOORS, ETC., AS NECESSARY FOR INSTALLATION OF THE NEW WORK, INCLUDING CUTTING OF HOLES AND OTHER OPENINGS FOR NEW WORK. CUTTING SHALL BE PERFORMED BY HAND OR SMALL POWER TOOLS; HOLES AND SLOTS CUT HEAT AND TO SIZE REQUIRED, WITH MINIMUM DISTURBANCE OF ADJACENT WORK; CUT HOLES IN CONCRETE SLABS FOR PIPES WITH CORE DRILLS OF PROPER SIZES. WHERE HOLES ARE CUT IN FLOORS, THE UNDERSIDE SHALL BE DUSTPROOFED TO CATCH ANY DEBRIS AND DUST WHICH MAY RESULT FROM THESE OPERATIONS AND TO PROTECT PERSONS FROM DAMAGES OR INJURIES. OPENINGS SHALL BE COVERED TEMPORARILY WHEN NOT IN USE AND PATCHED AS SOON AS WORK IS INSTALLED.
- B. PATCHING AND REPAIRS:
1. SURFACES AFFECTED BY PATCHING AND REPAIRING WORK SHALL BE RESTORED TO MATCH EXISTING ADJACENT SURFACES. WHERE WATERPROOF FLOORS ARE CUT, THIS CONTRACTOR SHALL PATCH AND REPAIR FLOORS IN SUCH A MANNER AS TO RESTORE THE ORIGINAL WATERPROOF CONDITION, AND AS DIRECTED BY THE DESIGNER.
- C. RE-EXAMINATION AND COVERING UP OF WORK:
1. RE-EXAMINATION OF QUESTIONED WORK MAY BE ORDERED BY THE DESIGNER, AND IF SO ORDERED, SUCH PART OF THE WORK MUST BE UNCOVERED BY THE CONTRACTOR. IF SUCH PART OF THE WORK BE FOUND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, THE OWNER SHALL PAY THE COST OF RE-EXAMINATION AND REPLACEMENT IF SUCH PART OF THE WORK BE FOUND NOT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PAY SUCH COST AND ALSO THE COST OF RESTORING THE WORK OF ANY OTHER CONTRACTOR DAMAGED OR REMOVED, IF ANY PART OF THE WORK OF THE CONTRACTOR OR OF HIS SUBCONTRACTORS BE COVERED UP BY THE DESIGNER WITHOUT APPROVAL OR THE CONSENT OF THE ENGINEER. SUCH WORK MUST, UPON REQUEST OF THE DESIGNER BE UNCOVERED AND RESTORED TO THE SATISFACTION OF THE ENGINEER AT THE EXPENSE OF THE CONTRACTOR.

1.11 VISITING THE PREMISES:

- A. THIS CONTRACTOR, BEFORE SUBMITTING HIS BID ON THE WORK, MUST VISIT THE SITE AND FAMILIARIZE HIMSELF WITH ALL VISIBLE EXISTING CONDITIONS. AS A RESULT OF HAVING VISITED PREMISES, THIS CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE WORK AS IT RELATES TO SUCH VISIBLE EXISTING CONDITIONS.

END OF SECTION 15400

DIVISION 15 – MECHANICAL / PLUMBING

SECTION 15410 – PLUMBING PIPING

PART 1.00 – GENERAL

1.01 RELATED DOCUMENTS:

- A. THIS SECTION COORDINATES WITH AND IS COMPLEMENTARY TO THE GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS AND THE GENERAL REQUIREMENTS, WHEREVER APPLICABLE TO MECHANICAL WORK.
- B. SECTION 15010 – SPECIAL REQUIREMENTS FOR MECHANICAL WORK.

1.02 DESCRIPTION OF WORK

- A. THE WORK INCLUDES THE PROVIDING OF ALL LABOR, MATERIALS, EQUIPMENT, ACCESSORIES, SERVICES AND TESTS NECESSARY TO COMPLETE AND MAKE READY FOR OPERATION BY THE OWNER; PLUMBING PIPING IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS.

1.03 QUALITY ASSURANCE:

- A. MANUFACTURERS: FIRMS REGULARLY ENGAGED IN THE MANUFACTURER OF EQUIPMENT OF THE TYPES AND CAPACITIES REQUIRED, WHOSE PRODUCTS HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR NOT LESS THAN 5 YEARS.
- B. THE EQUIPMENT SHALL BE DESIGNED, ASSEMBLED AND TESTED IN ACCORDANCE WITH APPLICABLE STANDARDS AS INDICATED IN SECTION 15010 AND SHALL BE LISTED AND LABELED BY UNDERWRITERS LABORATORIES.
- C. PROVIDE EQUIPMENT PRODUCED BY A MANUFACTURER LISTED AS AN APPROVED MANUFACTURER IN THIS SECTION OR ON THE DRAWING SCHEDULES.
- D. PROVIDE EQUIPMENT WHOSE PERFORMANCE UNDER SPECIFIED CONDITION, IS CERTIFIED BY THE MANUFACTURER.

1.04 GUARANTEE:

- A. REFER TO SECTION 15010 – SPECIAL REQUIREMENTS FOR MECHANICAL WORK.
- PART 2.00 – PRODUCTS
- 2.01 GENERAL:

- A. ALL PIPE SHALL BE NEW, FREE FROM SCALE OR RUST, AND OF THE MATERIAL AND WEIGHT SPECIFIED UNDER THE VARIOUS SERVICES. EACH LENGTH OF PIPE SHALL BE PROPERLY MARKED AT THE MILL FOR PROPER IDENTIFICATION WITH NAME OR SYMBOL OF MANUFACTURER.
- 2.02 SANITARY & STORM DRAINAGE:
- A. ABOVE GROUND SANITARY WASTE, VENT AND ROOF DRAIN PIPING SHALL SERVICE WEIGHT CAST IRON, NO-HUB TYPE. UNDERGROUND SANITARY AND DRAIN PIPING EXTRA HEAVY SHALL BE CAST IRON HUB AND SPIGOT TYPE WITH NEOPRENE JOINTS WITH RESTRAINT.
- B. CLEANOUTS FOR SANITARY AND STORM DRAINAGE SYSTEMS SHALL BE LOCATED IN ACCORDANCE WITH THE PLUMBING CODE REFERENCED IN PARAGRAPH 1.05 OF SECTION 15010.
- C. PROVIDE: TAP IN FLOOR DRAIN TRAPS TO RECEIVER TRAP PRIMER DISCHARGE.
- D. ALL VENT PENETRATIONS THROUGH BUILDING ROOF SHALL BE MADE WATERTIGHT BY THE USE OF PROPER FLASHING MATERIALS. SUBMIT FLASHING DETAILS FOR APPROVAL BY THE DESIGNER.

- E. CONTRACTOR MAY SUBMIT DEDUCT ALTERNATE FOR INSTALLATION OF SANITARY WASTE PIPING, ONLY, IN SCHEDULE 40 PVC, FOR BELOW SLAB AND ABOVE SLAB, TO CEILING HEIGHT ONLY.

"NO PVC PIPING SHALL BE ALLOWED IN RETURN AIR PLENUM"

2.03 DOMESTIC WATER:

- A. DOMESTIC COLD AND HOT WATER PIPING SHALL BE TYPE "K" COPPER. FITTINGS SHALL BE WROUGHT COPPER. 95X-5X ANTIMONY/TIN SOLDER SHALL BE USED.
- B. ALL POTABLE WATER PIPING SHALL BE DISINFECTED IN ACCORDANCE WITH LOCAL PLUMBING CODE INDICATED IN PARAGRAPH 1.05 OF SECTION 15010 AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL HEALTH DEPARTMENT.
- C. PROVIDE STOP VALVES FOR ALL DOMESTIC WATER CONNECTIONS TO FIXTURES EXCEPT WHERE INTEGRAL STOPS ARE PROVIDED, OR GATE VALVES ARE INDICATED ON THE DRAWINGS.
- D. ALL HOSE BIBS AND HYDRANTS SHALL BE PROVIDED WITH APPROVED VACUUM BREAKERS.
- E. PROVIDE CHROME PLATED, BRASS ANGLED STOP VALVES FOR ALL LAVATORIES, SINKS, ETC.
- F. DISCHARGE OF ALL RELIEF VALVES SHALL BE PIPED TO WITHIN 6" OF THE FLOOR TO PREVENT ACCIDENTAL SCALDING.

2.04 NOT USED.

2.05 CONDENSATE DRAINS & INDIRECT WASTES:

- A. CONDENSATE DRAINAGE AND INDIRECT WASTE PIPING SHALL BE TYPE "L" COPPER WITH 95X-5X ANTIMONY/TIN SWEAT JOINTS.

2.06 PIPE HANGERS AND SUPPORTS:

- A. PROVIDE NECESSARY STRUCTURAL MEMBERS, HANGERS AND SUPPORTS OF APPROVED DESIGN TO KEEP PIPING IN PROPER ALIGNMENT AND PREVENT TRANSMISSION OF INJURIOUS THRUSTS AND VIBRATIONS. IN ALL CASES WHERE HANGERS, BRACKETS, ETC., ARE SUPPORTED FROM METAL DECKING AND/OR CONCRETE CONSTRUCTION, CARE SHALL BE TAKEN NOT TO WEAKEN DECKING AND/OR CONCRETE OR PENETRATE WATERPROOFING. ALL HANGERS AND SUPPORTS SHALL BE CAPABLE OF SCREW ADJUSTMENT AFTER PIPING IS ERECTED. HANGERS SUPPORTING PIPING EXPANDING INTO LOOPS, BENDS AND OFFSETS SHALL BE SECURED TO THE BUILDING STRUCTURE IN SUCH A MANNER THAT HORIZONTAL TRANSMISSION PERPENDICULAR TO THE RUN OF PIPING SUPPORTED MAY BE MADE TO ACCOMMODATE DISPLACEMENT DUE TO EXPANSION.
- B. BEAM CLAMPS – HANGERS SUPPORTED FROM FLOOR STEEL SHALL BE APPROVED I SMALLER SHALL BE C & P FIG-148 ADJUSTABLE BEAM CLAMPS. FOR PIPING 2 1/4 INCHES BEAM CLAMPS, I BEAM CLAMPS FOR HANGERS SUPPORTING PIPE 2 INCHES AND AND LARGER, I BEAM CLAMPS SHALL BE WROUGHT STEEL. C & P FIG. NO. 288 OR EQUAL.
- C. WHERE PIPING IS RUN NEAR THE FLOOR AND NOT HUNG FROM THE CEILING CONSTRUCTION BUT IS SUPPORTED FROM THE FLOOR, SUCH SUPPORTS SHALL BE OF PIPE STANDARDS WITH BASE FLANGE AND ADJUSTABLE TOP YOKE SIMILAR TO F & S FIG. NO. 907 OR EQUAL.
- D. ALL VERTICAL PIPING SHALL BE ANCHORED BY MEANS OF HEAVY STEEL CLAMPS SECURELY BOLTED OR WELDED TO THE PIPING, AND WITH END EXTENSION BEARING ON THE BUILDING.
- E. ALL VERTICAL PIPING SHALL BE GUIDED AT EACH FLOOR BY USE OF CLAMPS FASTENED TO BUILDING STRUCTURE. PROVIDE 360 DEGREES PROTECTIVE SADDLE AT GUIDES. SADDLES SHALL BE FASTENED TO PIPE OR INSULATION.
- F. VERTICAL RUNS OF PIPE NOT OVER 15 FEET LONG SHALL BE SUPPORTED BY HANGERS PLACED NOT OVER ONE FOOT FROM THE ELBOWS ON THE CONNECTING HORIZONTAL RUNS.
- G. VERTICAL RUNS OF PIPE OVER 15 FEET LONG BUT NOT OVER 60 FEET LONG AND NOT OVER 6 INCHES IN SIZE – NOT OVER 30 FEET LONG AND NOT OVER 12 INCHES IN SIZE, SHALL BE SUPPORTED ON HEAVY STEEL CLAMPS. CLAMPS SHALL BE BOLTED TIGHTLY AROUND THE PIPES AND SHALL REST SECURELY ON THE BUILDING STRUCTURE WITHOUT BLOCKING CLAMPS SHALL BE WELDED TO THE PIPES OR PLACED BELOW COUPLINGS. CLAMPS SHALL BE TYPE B, FEDERAL SPECIFICATION WW-H-171C, UNLESS OTHER TYPES ARE APPROVED.

HANGER RODS SHALL BE OF THE FOLLOWING DIAMETERS AND SPACING:

PIPE SIZE	ROD DIAMETER	MAX. SPACING
1-1/4 " AND BELOW	3/8 "	7'-0"
1-1/2" AND 2"	3/8 "	9'-0" COPPER (8'-0")
2-1/2" AND 3	1/2"	11'-0" COPPER (9'-0")
4 "	1/2"	14'-0"

- H. PIPING SHALL NOT BE HUNG FROM OTHER PIPING, DUCTS, CONDUITS OR VERTICAL EXPANSION SHIELDS WILL BE PERMITTED. HANGER RODS SHALL NOT PIERCE DUCTS.
- I. WHERE ADDITIONAL STEEL IS REQUIRED FOR THE SUPPORT OF HANGERS, FURNISH AND INSTALL SAME SUBJECT TO THE APPROVAL OF THE DESIGNER.
- J. ALL PIPING RUNNING ON WALLS BE SUPPORTED BY MEANS OF HANGERS SUSPENDED FROM HEAVY ANGLE IRON WALL BRACKETS. NO WALL HOOKS WILL BE PERMITTED.
- K. LATERAL BRACING OF HORIZONTAL PIPE SHALL BE PROVIDED WHERE REQUIRED TO PREVENT SIDE SWAY OR VIBRATION.
- L. NO PIPING SHALL BE ASSEMBLED IN SUCH A MANNER AS TO HAVE DIELECTRIC ACTION BETWEEN FERROUS AND NON-FERROUS MATERIALS.
- 2.07

- C. MECHANICAL SYSTEM INSULATION – THE WORK COVERED BY THIS SPECIFICATION CONSISTS IN FURNISHING ALL LABOR, EQUIPMENT, ACCESSORIES AND MATERIALS AND IN PERFORMING ALL OPERATIONS NE



Saxon Park - Norman Forward
90% Construction Documents Cost Estimate
December 10, 2024

ITEM	QUAN.	UNIT	UNIT COST	TOTAL
South Site Improvements				
Site clearing, earthwork & rough grading	83,000	S.F.	\$2.15	\$178,450
Erosion control silt fence	680	L.F.	\$3	\$2,040
Tree protection fence	390	L.F.	\$3	\$1,170
Concrete sidewalk	7,740	S.F.	\$8	\$61,920
Concrete curb and gutter	635	L.F.	\$25	\$15,875
Concrete pad for bench (4'x11')	3	EA.	\$400	\$1,200
Concrete pad for trash and dog waste (3'x3')	5	EA.	\$150	\$750
Ashalt parking lot pavement w/ base	15,900	S.F.	\$5	\$79,500
Parking lot striping and signage	1	Allow	\$2,500	\$2,500
Subgrade stabilization	21,220	S.F.	\$1	\$21,220
Detention pond excavation / grading	3,000	C.Y.	\$10	\$30,000
Detention pond outlet structure	1	Allow	\$10,000	\$10,000
Dumpster reinforced concrete pad	300	S.F.	\$20	\$6,000
Sidewalk drains	3	EA.	\$600	\$1,800
Concrete steps south of building	24	F.F.	\$50	\$1,200
Handrail at steps	15	L.F.	\$100	\$1,500
Concrete wing-wall at steps (2'ht x 15' length)	30	F.F.	\$125	\$3,750
Concrete flush curb at playground	300	L.F.	\$25	\$7,500
Playground surface drainage	1	Allow	\$10,000	\$10,000
Section Total				\$436,375
Site Utilities				
Electrical service from OEC	1	Allow	\$10,000	\$10,000
Electrical service road boring at 36th Ave.	1	Allow	\$10,000	\$10,000
Electrical underground to restroom	630	L.F.	\$20	\$12,600
Sanitary sewer connection to lateral lines	140	L.F.	\$50	\$7,000
Sanitary sewer septic tank and lateral lines	1	Allow	\$30,000	\$30,000
Water meters	2	EA.	\$5,000	\$10,000
Water lines to restroom (2" pipe)	600	L.F.	\$40	\$24,000
Section Total				\$103,600
Building				
Restroom / shelter (restroom portion)	570	S.F.	\$550	\$313,500
Restroom / shelter (shelter portion)	910	S.F.	\$180	\$163,800
Section Total				\$477,300
Landscaping				
Solid sod and fine grading	50,400	S.F.	\$0.50	\$25,200
Section Total				\$25,200



Construction Costs

Project Subtotal				\$1,042,475
Contractor General Conditions (15%)				\$156,371
Construction & Design Contingency (10%)				\$104,248
Design Fee and Project Expenses				\$192,400
Total Construction Estimate				\$1,495,494

Playground & Site Furniture, Purchasing by Parks Department

Play equipment	1	Allow	\$150,000	\$150,000
Poured-in-place surfacing w/ concrete base	4,100	S.F.	\$35	\$143,500
Shade canopy at playgrounds	1	Allow	\$40,000	\$40,000
Picnic tables at shelter	4	EA.	\$2,000	\$8,000
Benches at playground	3	EA.	\$1,500	\$4,500
Trash receptacles	4	EA.	\$2,000	\$8,000
Bike racks	1	EA.	\$1,200	\$1,200
Dog waste station	1	EA.	\$750	\$750
Tree planting	16	EA	\$800	\$12,800
Section Total				\$368,750

Centurion Parkway, Contribution from Parks Department

Site clearing, earthwork & rough grading	15,830	S.F.	\$2.15	\$34,035
Concrete curb and gutter	495	L.F.	\$25	\$12,375
Ashalt heavy-duty roadway pavement w/ base	8,520	S.F.	\$8	\$68,160
Subgrade stabilization	9,530	S.F.	\$1	\$9,530
Water line service connection	480	L.F.	\$25	\$12,000
Section Total				\$136,100

Project Total	\$2,000,343
Project Budget	\$2,000,000
Difference	\$343

Alternate Bid - Solar Lighting

Solar light pole fixtures (22' height)	7	EA.	\$8,000	\$56,000
Section Total				\$56,000

Alternate Bid - North Site Improvements

Concrete trail (8' W x 465 LF)	3,720	S.F.	\$8	\$29,760
Retaining wall, precast concrete block (3'ht x 180LF)	540	F.F.	\$70	\$37,800
Ornamental metal fence	180	L.F.	\$100	\$18,000
Sidewalk drains	1	EA.	\$600	\$600
Decomposed granite trail (8' W x 160 LF)	1,300	S.F.	\$5	\$6,500
Barb-wire fence braces	2	EA.	\$2,000	\$4,000
Bollards (by owner)				
Section Total				\$96,660



Alternate Bid - Irrigation

Irrigation system for lawn	12,400	S.F.	\$1.50	\$18,600
Section Total				\$18,600

Alternate Bid - Signage & Wayfinding

Park map	3	Allow	\$5,000	\$15,000
Cross country & trail markers	10	Allow	\$1,500	\$15,000
Amenity identification signs	2	Allow	\$6,000	\$12,000
Section Total				\$42,000

Alternate Bid - Purchasing by Parks Department

Artificial turf south of restroom building	1,080	S.F.	\$15.00	\$16,200
Section Total				\$16,200