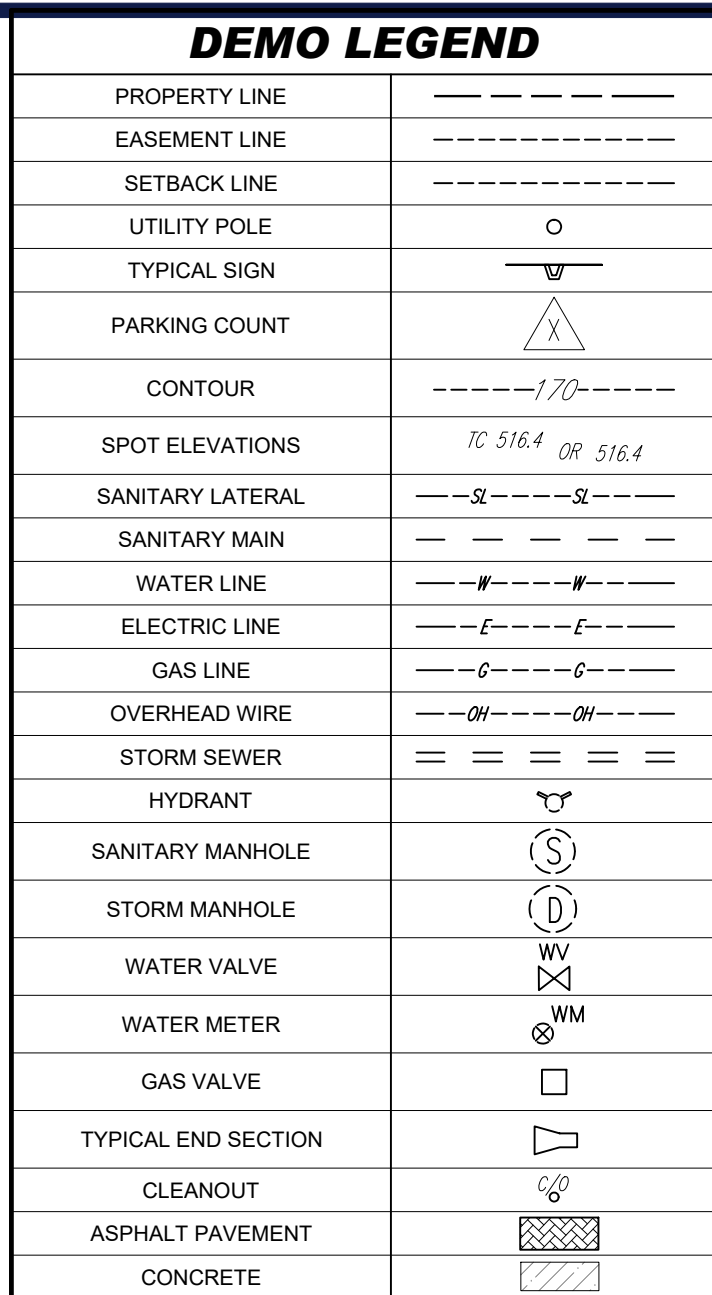




1. BOHLER ENGINEERING F/L, LLC IS NOT RESPONSIBLE FOR JOB SITE SAFETY OR SUPERVISION. CONTRACTOR IS TO PROCEED WITH THE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, FOLLOWING ALL THE OSHA REQUIREMENTS, TO ENSURE PUBLIC AND CONTRACTOR SAFETY.
2. ALL DEMOLITION ACTIVITIES ARE TO BE PERFORMED IN ACCORDANCE WITH THE FEDERAL, STATE AND LOCAL REGULATIONS, AS WELL AS ALL FEDERAL, STATE AND LOCAL REGULATIONS. ANY DISCREPANCIES OR DEVIATIONS SHALL BE IDENTIFIED BY THE CONTRACTOR TO BOHLER ENGINEERING F/L, LLC IN WRITING FOR RESOLUTION PRIOR TO INITIATION OF SITE ACTIVITY.
3. PRIOR TO STARTING ANY DEMOLITION CONTRACTOR IS RESPONSIBLE FOR:
 - A. THE CONTRACTOR SHALL OBTAIN A SUNSHINE STATE ONE CALL LOCATION CERTIFICATION PRIOR TO ANY EXCAVATION OR DEMOLITION. THE NUMBER IS 1-800-432-4770.
 - B. ENSURING COPIES OF ALL PERMITS AND APPROVALS MUST BE MAINTAINED ON SITE AND AVAILABLE FOR REVIEW.
 - C. INSTALLING THE REQUIRED SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO SITE DISTURBANCE.
 - D. LOCATE/CAP ALL UTILITIES AND SERVICES, INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE.
 - E. PROTECTING AND MAINTAINING IN OPERATION, ALL ACTIVE SYSTEMS THAT ARE NOT BEING REMOVED DURING ALL DEMOLITION ACTIVITIES.
 - F. FAMILIARIZING THEMSELVES WITH THE APPLICABLE UTILITY SERVICE PROVIDER AND BEING RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION REQUIREMENTS FOR THE PROJECT. THE CONTRACTOR SHALL PROVIDE THE OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTION AND UTILITY COMPANY REQUIREMENTS.

G. COORDINATION WITH UTILITY COMPANIES REGARDING WORKING "OFF-PEAK" HOURS OR ON WEEKENDS AS MAY BE REQUIRED TO MINIMIZE THE IMPACT ON THE AFFECTED PARTIES.

H. A COMPLETE INSPECTION OF CONTAMINANTS BY A LICENSED ENVIRONMENTAL TESTING AGENCY, OF ALL BUILDINGS AND/OR STRUCTURES TO BE REMOVED, SAME SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL ENVIRONMENTAL REGULATIONS. ANY/ALL CONTAMINANTS SHALL BE REMOVED AND DISPOSED OF BY A FEDERALLY LICENSED CONTRACTOR IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. ALL ENVIRONMENTAL REMEDIATION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL MATERIAL, SOILS, ASBESTOS, OR OTHER REFERENCED OR IMPLIED HEREIN IS THE SOLE RESPONSIBILITY OF THE OWNER'S ENVIRONMENTAL CONSULTANT.

4. THE CONTRACTOR SHALL PROVIDE ALL THE "MEANS AND METHODS" NECESSARY TO PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF EXISTING STRUCTURES. THE CONTRACTOR SHALL PROVIDE ALL MEANS REMAINING ON OR AT THE SITE. THE DEMOLITION CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS OF DAMAGE TO ALL ITEMS THAT ARE TO REMAIN AS A RESULT OF HIS ACTIVITIES. ALL REPAIRS SHALL USE NEW MATERIAL. THE REPAIRS SHALL RESTORE THE ITEM TO THE PRE-DEMOLITION CONDITION.

5. IN THE ABSENCE OF SPECIFICATIONS, THE CONTRACTOR SHALL PERFORM EARTH MOVEMENT ACTIVITIES, DEMOLITION AND REMOVAL OF ALL FOUNDATION WALLS, FOOTINGS, AND OTHER MATERIALS WITHIN THE LIMITS OF DISTURBANCE IN ACCORDANCE WITH DIRECTION BY OWNER'S STRUCTURAL OR GEOTECHNICAL ENGINEER.

6. EXPLOSIVES SHALL NOT BE USED WITHOUT PRIOR WRITTEN CONSENT OF BOTH THE OWNER AND APPLICABLE GOVERNMENTAL AUTHORITIES. ALL THE REQUIRED PERMITS AND EXPLOSIVE CONTROL MEASURES THAT ARE REQUIRED BY THE FEDERAL, STATE, AND LOCAL GOVERNMENTS SHALL BE IN PLACE PRIOR TO STARTING AN EXPLOSIVE PROGRAM. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ALL INSPECTION AND SEISMIC VIBRATION TESTING THAT IS REQUIRED TO MONITOR THE EFFECTS ON ALL LOCAL STRUCTURES.

7. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AND GENERALLY ACCEPTED SAFE PRACTICES IN CONFORMANCE WITH: THE "MANUAL ON UNIFORM TRAFFIC CONTROL," AS WELL AS FEDERAL, STATE, AND LOCAL REGULATIONS WHEN DEMOLITION RELATED ACTIVITIES IMPACT ROADWAYS OR ROADWAY RIGHTS - OF - WAY.

8. CONDUCT DEMOLITION ACTIVITIES IN SUCH A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS AND OTHER ADJACENT FACILITIES. STREET CLOSURE PERMITS MUST BE RECEIVED FROM THE APPROPRIATE GOVERNMENTAL AUTHORITY.

9. DEMOLITION ACTIVITIES AND EQUIPMENT SHALL NOT USE AREAS OUTSIDE THE DEFINED PROPERTY LINE WITHOUT WRITTEN PERMISSION OF THE OWNER, AND/OR APPROPRIATE GOVERNMENT AGENCY.

10. USE DUST CONTROL MEASURES TO LIMIT AIRBORNE DUST AND DIRT RISING AND SCATTERING IN THE AIR IN ACCORDANCE WITH FEDERAL, STATE, AND/OR LOCAL STANDARDS. AFTER THE DEMOLITION IS COMPLETE, ADJACENT STRUCTURES AND IMPROVEMENTS SHALL BE CLEANED OF ALL DUST AND DEBRIS CAUSED BY THE DEMOLITION OPERATIONS. THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL ADJACENT AREAS TO THEIR "PRE-DEMOLITION" CONDITION.

11. CONTRACTOR IS RESPONSIBLE TO SAFEGUARD SITE AS NECESSARY TO PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE ENTRY OF UNAUTHORIZED PERSONS AT ANY TIME.

12. THIS DEMOLITION PLAN IS INTENDED TO IDENTIFY THOSE EXISTING ITEMS/CONDITIONS WHICH ARE TO BE REMOVED. IT IS NOT INTENDED TO PROVIDE DIRECTION OTHER THAN THAT ALL METHODS AND MEANS ARE TO BE IN ACCORDANCE WITH STATE, FEDERAL, LOCAL, AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE.

13. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL DEMOLITION WASTES AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL TOWN, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE CODES.

14. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING SITE IMPROVEMENTS AND UTILITIES. ALL DISCREPANCIES SHALL BE IDENTIFIED TO THE ENGINEER IN WRITING.

15. ALL EXISTING UTILITIES BEING REMOVED SHALL BE DONE SO BY THE CONTRACTOR IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.

DATUM NOTES:
ELEVATIONS ARE BASED ON NAVD88 DATUM DETERMINED BY GPS OBSERVATIONS AND TIED IN TO THE BENCHMARK LB 8261 WITH A PUBLISHED ELEVATION OF 12.04 FEET.

THE SITE EXISTS WITHIN ZONE X WHICH MEANS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN OF MINIMAL FLOOD HAZARD PER THE FEMA MAP (12099C0781F DATED 10/05/2017).

1. REMOVE EXISTING SEWER AND WATER AFTER PROPOSED SEWER AND WATER CONNECTION.

REVISIONS

[illegible]

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PROJECT No.:	FLB230233.00
DRAWN BY:	RN
CHECKED BY:	RM
DATE:	02/19/2025
CAD I.D.:	P-CIVL-EXDM

PROJECT:

**PRELIMINARY
ENGINEERING
PLANS**

FOR
UNITED
MANAGEMENT

**PROPOSED
DEVELOPMENT**

501 LAKE AVE
CITY OF LAKE WORTH BEACH
LAKE WORTH BEACH, FL

**1900 NW CORPORATE BOULEVARD
SUITE 101E
BOCA RATON, FLORIDA 33431
Phone: (561) 571-0280
Fax: (561) 571-0281
FLORIDA BUSINESS CERT. OF AUTH. No. 30780**

SHEET TITLE

DEMOLITION PLAN

SHEET NUMBER

C-201

ORG. DATE - 6/25/2025



SITE DATA TABLE			
EXISTING ZONING: DT (DOWNTOWN) AND M-U-E (MIXED USE-EAST) PROPOSED USE: DT (DOWNTOWN), MIXED USE - MUSEUM (INSTITUTIONAL) AND MULTI-FAMILY RESIDENTIAL) BLOCK: 23 LOTS: 1+10, 17+21 AND 22+27			
BULK REQUIREMENTS			
ITEM	CODE	PERMITTED	PROPOSED
MIN LOT AREA	§ 23.3-13 & 14	6,500 SF	LOT AREA: 69,624 SF (1.5983 AC) VACATED ALLEY: 4,962.5 SF (0.114 AC) TOTAL: 74,586.5 SF (1.712 AC)
MIN LOT WIDTH	§ 23.3-13 & 14	50'	125'
MIN YARD SETBACKS			
FRONT YARD	§ 23.3-13 & 14	10'	14'
SIDE YARD	§ 23.3-13 & 14	10' (0' INTERIOR LOT)	12' (0' INTERIOR LOT)
REAR YARD	§ 23.3-13 & 14	10'	12'
MAX PERMITTED HEIGHT	§ 23.3-14D	56'-3"	55'-2" (MUSEUM) 56'-2" (RES.)
MAX LOT COVERAGE	§ 23.3-14	7,500 SF - 60%	8,522 SF (MUSEUM) 32,074 SF (RES.) TOTAL: 41,496 SF - 55.6%
MAX FLOOR AREA RATIO (FAR)	§ 23.3-1.12	2.45	2.27
MIN PARKING COUNT	§ 23.4-10	215	(SEE BREAKDOWN BELOW)
OFF-SITE PARKING			
PROPOSED PARKING BREAKDOWN		RESIDENTIAL LOT	GARAGE PARKING: 124 ON-STREET PARKING: 15
			BICYCLE (ALT. PARKING): 18
		MUSEUM LOT	OFF-STREET: 4 ON-STREET: 10
		PROP CITY -GARAGE PARKING (SEPARATE APPLICATION)	45
		TOTAL PROPOSED PARKING	216
*NOTE: THE EXISTING M-U-E ZONED LOT WILL BE REZONED TO DT			

SITE NOTES

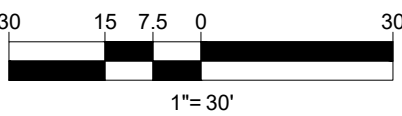
- 1 THE PROPOSED ACTIVITIES SHALL COMPLY WITH CITY OF LAKE WORTH BEACH DEVELOPMENT REGULATIONS (LATEST EDITION) INCLUDING THE TREE AND
2 LANDSCAPE CODE, STORM WATER MANAGEMENT REGULATIONS, AND FIRE CODES AT THE TIME OF PERMITTING.
3 ALL ACTIVITIES ARE TO BE COMPLETED WITHIN THE CITY OF LAKE WORTH BEACH LAND DEVELOPMENT REGULATIONS (LATEST
4 EDITION). ALL PROPOSED SIDEWALKS SHALL MEET ADA REQUIREMENTS.
5 ALL DIMENSIONS ARE SHOWN AT FACE OF CURB, UNLESS OTHERWISE NOTED. B/C INDICATED DIMENSION IS TO BACK OF CURB.
6 ALL RAIL DIMENSIONS ARE 3' AT THE FACE OF CURB UNLESS OTHERWISE NOTED.
7 ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED. PERMITS SHALL BE OBTAINED FOR ALL REPRESENTATIONAL PURPOSES, AND SHALL BE PERMITTED SEPARATELY.
8 A RIGHT-OF-WAY PERMIT WILL BE REQUIRED FOR ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY. SPECIFIC STIPULATIONS OR CONDITIONS WILL BE
9 IMPOSED AT THE TIME OF PERMIT APPLICATION.
10 ALL UTILITIES, INCLUDING BUT NOT LIMITED TO, SHALL BE EXEMPT THE CONTRACTOR FROM OBTAINING THE REQUIRED BUILDING, ELECTRICAL, PLUMBING, AND
11 MECHANICAL PERMITS. THESE INCLUDE BUT ARE NOT LIMITED TO ANY STRUCTURE, SIGN, WALL, ENCLOSURE, OR SCREENING, ETC.
12 IN THE EVENT THE PROJECT IS TERMINATED PRIOR TO CONSTRUCTION COMPLETION, THE PROJECT SHALL BE BROUGHT TO GRADE, SEED, AND ALL
13 DEBRIS AND MATERIALS SHALL BE HAULED OFF-SITE AND DUMPED AT A STATE OF FLORIDA APPROVED FACILITY.
14 ANY DAMAGED SIDEWALK OR CURB WITHIN THE F.D.O.T. RIGHT-OF-WAY SHALL BE REMOVED AND REPLACED.
15 ALL DISTURBED AREAS WITHIN THE F.D.O.T. RIGHT-OF-WAY WILL BE SODDED.
16 STANDARD INDICES REFER TO THE LATEST VERSION OF F.D.O.T. "ROADWAY AND TRAFFIC DESIGN STANDARDS".
17 ALL PERMITS SHALL BE OBTAINED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING REQUIRED HOURS OF LANE
18 CLOSURE. ALL LANE CLOSURES MUST BE APPROVED BY THE DEPARTMENT AT LEAST TWO WEEKS PRIOR TO THE LANE CLOSURE IN ACCORDANCE WITH
19 THE DISTRICT LANE CLOSURE POLICY.
20 ALL POTABLE WATER, RECLAIMED WATER, AND SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPROVED CONSTRUCTION PLAN.
21 FRESH WATER AND WASTEWATER PERMITS MUST BE OBTAINED PRIOR TO BEGINNING CONSTRUCTION.
22 PROPER DOCUMENTATION FOR ALL PUBLIC UTILITY EASEMENTS SHALL BE PROVIDED TO THE PROPERTY MANAGEMENT DEPARTMENT PRIOR
23 TO CERTIFICATE OF COMPLETION.
24 UNLESS SPECIFIC DRAWINGS ARE REQUIRED PRIOR TO PLACING ANY WATER AND WASTEWATER FACILITIES INTO SERVICE, PLEASE SEE THE ADDITIONAL
25 INFORMATION SECTION FOR INSTRUCTIONS.

RIGHT-OF-WAY NOTES

1. A RIGHT-OF-WAY USE PERMIT WILL BE REQUIRED FOR ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY. SPECIFIC STIPULATIONS OR CONDITIONS WILL BE IMPOSED AT THE TIME OF PERMIT APPLICATION.
2. ANY EXISTING UTILITY LOCATED WITHIN THE RIGHT-OF-WAY DISTURBED THROUGH THE COURSE OF CONSTRUCTION WILL BE RE-GRADED AND SODDED.
3. IT SHALL BE THE DEVELOPER'S RESPONSIBILITY TO PROTECT ALL COUNTY OR F.O.D. OWNED AND/OR MAINTAINED INFRASTRUCTURE, ANY/ALL COSTS ASSOCIATED WITH ALTERATIONS, RELOCATIONS, OR REPAIRS MADE NECESSARY BY THIS DEVELOPMENT SHALL BE BORNE BY EITHER THE OWNER AND/OR CONTRACTOR. THE CONTRACTOR SHALL NOTIFY THE COUNTY OF ANY SIGNALIZATION OR TRAFFIC CONDUCTED ON THE ROAD. ANY ADDITIONAL PULL/TRAFFIC CONTROL BOXES WILL BE PERMITTED. IN THE EVENT OF ANY DAMAGE, OR RESTRICTION TO THE ROAD, THE COUNTY SHALL BE RESTORED BACK TO THE ORIGINAL CONFIGURATION. ORIGINAL CONFIGURATION IS DEFINED AS SYSTEM STATUS, LAYOUT, AND DESIGN PRIOR TO ANY WORK COMMENCING.
4. UTILITIES TO BE RELOCATED BY THE UTILITY PROVIDER, CONTRACTOR SHALL COORDINATE DEMOLITION SCHEDULE WITH UTILITY PROVIDERS. DEMOLITION OF SIDEWALKS AND DRIVEWAYS SHALL OCCUR PRIOR TO UTILITY RELOCATIONS.

ADA ACCESSIBILITY NOTES

- ALL HANDICAPPED PARKING SPACES AND ACCESS AISLES ADJACENT TO THE HANDICAP PARKING SPACES SHALL HAVE A MAXIMUM OF 2% SLOPE IN ALL DIRECTIONS (THIS INCLUDING SLOPE AND CROSS SLOPE).
 2. ACCESSIBLE ROUTES FROM THE DRIVEWAY TO THE HANDICAP PARKING SPACES AND FROM THE HANDICAP PARKING SPACES TO THE ACCESSIBLE BUILDING ENTRANCES MUST BE PROVIDED. THIS ACCESSIBLE ROUTE SHALL BE A MINIMUM OF 60" WIDE. THE RUNNING SLOPE OF AN ACCESSIBLE ROUTE SHALL NOT EXCEED 5% AND THE CROSS SLOPE SHALL NOT EXCEED 2%.
 3. SLOPES EXCEEDING 5% BUT LESS THAN 8% WILL REQUIRE A RAMP AND MUST CONFORM TO THE REQUIREMENTS FOR RAMP DESIGN (HANDRAILS, CURBS, LANDINGS). NO RAMP SHALL EXCEED AN 8% RUNNING SLOPE OR 2% CROSS SLOPE.
 4. IN THE CASE THAT A NEW SIDEWALK WILL BE CONSTRUCTED IN THE ROW OF A SITE, THE RUNNING SLOPE OF THE SIDEWALK SHALL NOT EXCEED 5% AND THE CROSS SLOPE SHALL NOT EXCEED 2%. THIS STANDARD APPLIES TO CROSS WALKS IN THE DRIVEWAY AS WELL AND WILL REQUIRE SPECIAL CONSIDERATION DURING TAKING TO MARKET.
 5. IT WILL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO ENSURE THAT THE HANDICAP PARKING SPACES, ACCESSIBLE ROUTES, AND SIDEWALKS/CROSSWALKS ARE CONSTRUCTED TO MEET ADA REQUIREMENTS.
 6. ANY REMEDIATION WORK REQUIRED TO BRING THE PROJECT INTO COMPLIANCE WITH THE ENGINEER'S ATTENTION IMMEDIATELY. ANYTHING NOT IN THE ABOVE STANDARDS WILL REQUIRE REMOVAL AND REPLACEMENT OF THE NON COMPLIANT AREAS AT THE GENERAL CONTRACTORS COST.



REVISIONS

[illegible]

PRELIMINARY

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PROJECT No.: FLB230233.00
DRAWN BY: RN
CHECKED BY: RM
DATE: 02/19/2025
CAD I.D.: P-CIVL-SITE

PROJECT:

**PRELIMINARY
ENGINEERING
PLANS**

FOR

UNITED
MANAGEMENT

PROPOSED DEVELOPMENT

501 LAKE AVE
CITY OF LAKE WORTH BEACH
LAKE WORTH BEACH, FL

BOHLER //

1900 NW CORPORATE BOULEVARD

BOCA RATON, FLORIDA 33431

Phone: (561) 571-0280
Fax: (561) 571-0284

FLORIDA BUSINESS CERT. OF AUTH. No. 3078

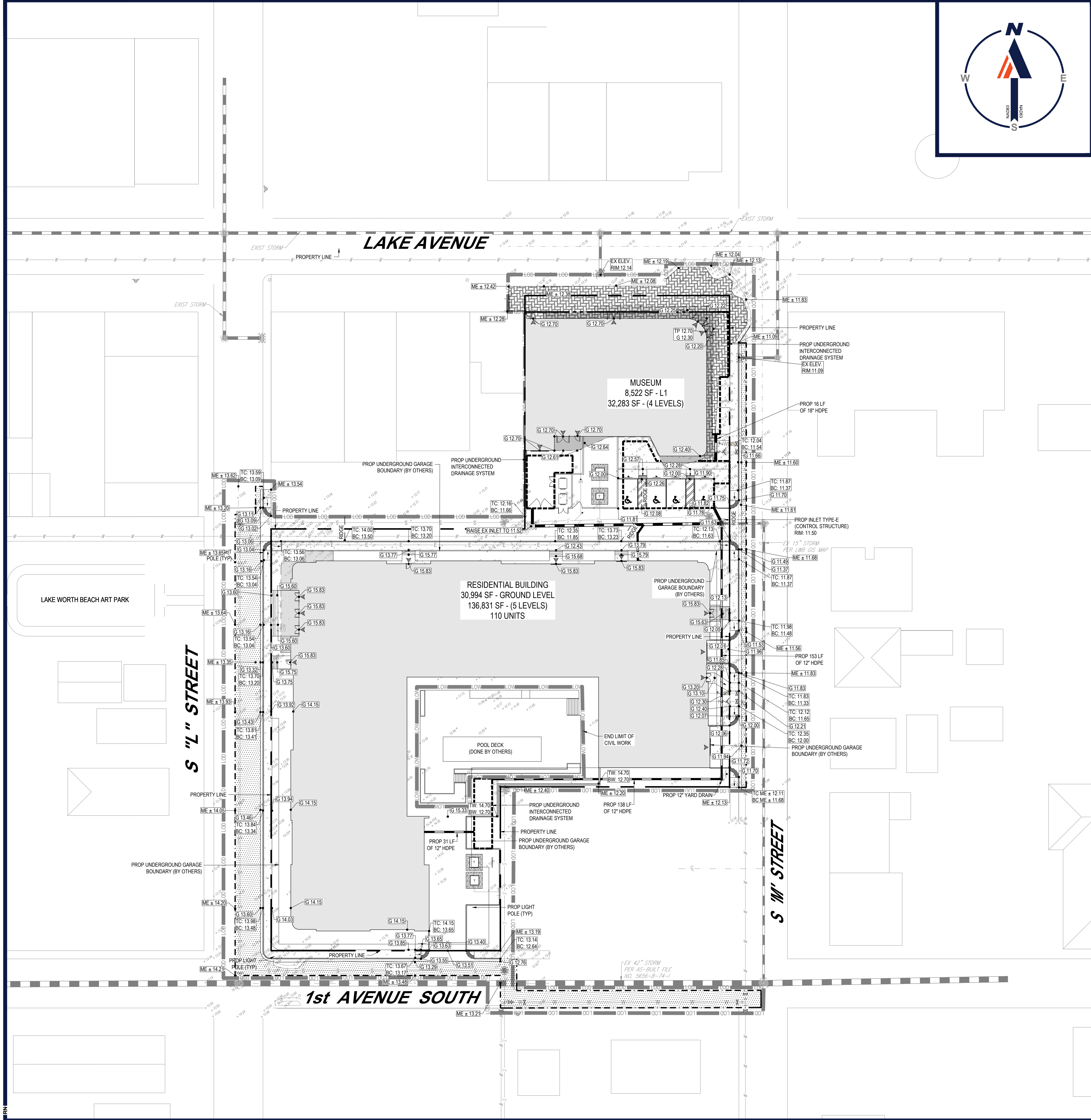
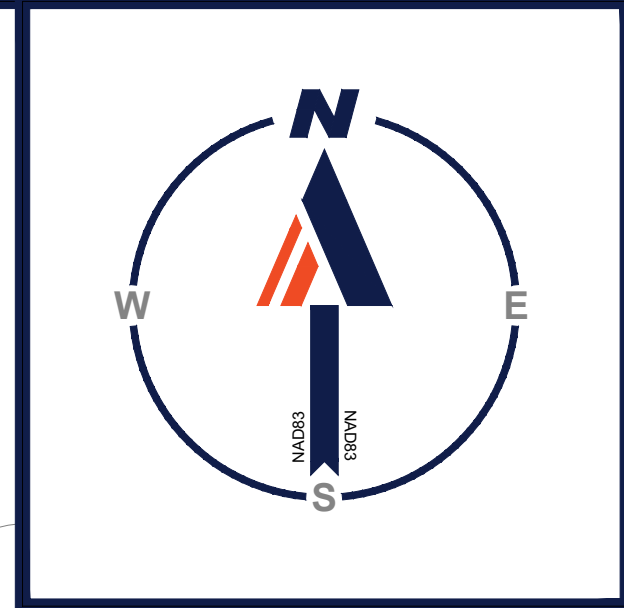
SHEET TITLE:

SITE LAYOUT

SHEET NUMBER:

C-301

ORG. DATE - 6/25/2025



GENERAL NOTES

- THE CONTRACTOR MUST BE FAMILIAR WITH ALL NOTES ON THE GENERAL NOTES SHEET.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ANY EXISTING UTILITIES OR OBSTRUCTIONS. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER IN WRITING OF ANY RELOCATIONS OR CROSSING CONFLICTS PRIOR TO PROCEEDING WITH CONSTRUCTION.
- ALL REQUESTS FOR CHANGES TO THE STANDARD INDEXES SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER OF RECORD. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL OTHER AGENCY APPROVALS IF REQUIRED.
- IF THE CONTRACTOR HAS LEADS AND BUILDING CONNECTIONS WITH THE ARCHITECTURAL PLANS, NOTIFY THE ENGINEER AND ARCHITECT OF RECORD IN WRITING OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH CONSTRUCTION.
- STANDARD INDEXES REFER TO THE LATEST EDITION OF F.D.O.T. "ROADWAY AND TRAFFIC DESIGN STANDARDS" AT THE TIME OF DRAWING PREPARATION.
- ALL DISTURBED AREAS WITHIN RIGHT-OF-WAY WILL NEED TO BE SODED.

PAVING AND GRADING NOTES

- ALL ELEVATIONS SHOWN ARE IN REFERENCE TO THE SURVEYOR'S BENCHMARKS AND MUST BE VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO GROUNDBREAK.
- THE EXISTING SURVEYED ELEVATION OF THE GROUND SHALL BE CONSIDERED A PART OF THESE PLANS.
- THE GEOTECHNICAL REPORT AND RECOMMENDATIONS SET FORTH THEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND IN CASE OF CONFLICT SHALL TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCY.
- ALL UNDERGROUND UTILITIES SHALL BE COMPLETED PRIOR TO CONSTRUCTION OF THE PAVING BASE.
- WHERE ANY PROPOSED PAVEMENT IS TO BE CONNECTED TO EXISTING PAVEMENT, THE EXISTING EDGE OF PAVEMENT SHALL BE SAWCUT TO ENSURE A PROPER JOINT.
- ALL MATERIALS AND INSTALLATION SHALL MEET THE PAVEMENT DETAILS PROVIDED AND BE INSTALLED ACCORDING TO FDOT OR OTHER PROJECT SPECIFICATIONS.
- RETAINING WALLS (IF APPLICABLE) SHOWN ARE FOR GRADING AND LAYOUT PURPOSES ONLY. WALL DESIGN PLANS ARE TO BE PROVIDED BY OTHERS. SEE WALL PREPARED BY OTHERS FOR TRUE TOP AND BOTTOM ELEVATIONS. RETAINING WALLS SHALL BE CONSTRUCTED TO A GREATER RAMP IN HEIGHT AT THE END OF WALL. RETAINING WALLS ARE TO BE PERMITTED SEPARATELY.

DATUM NOTE

ELEVATIONS ARE BASED ON NAVD88 DATUM DETERMINED BY GPS OBSERVATIONS AND TIED INTO THE NGS BENCHMARK NO. LB 8261 WITH A PUBLISHED ELEVATION OF 12.24 FEET.

FEMA NOTE

THE PROPERTY IS LOCATED IN ZONE X (AREAS OF MINIMAL FLOOD HAZARD) PER MAP ENTITLED "FIRM, FLOOD INSURANCE RATE MAP. MAP NUMBER 12099C0781F, WITH A MAP REVISION DATE OF OCTOBER 5, 2017.

DEWATERING NOTE

CONTRACTOR RESPONSIBLE FOR OBTAINING ALL DEWATERING PERMITS PRIOR TO CONSTRUCTION. OBTAINING DEWATERING PERMITS IS OUTSIDE OF BOHLERS SCOPE OF WORK.

STORM DRAINAGE NOTES

- GENERAL:
1. THE CONTRACTOR MUST BE FAMILIAR WITH ALL NOTES ON THE GENERAL NOTES SHEET.
2. DISTANCES AND LENGTHS OF PIPE SHOWN ON PLANS ARE REFERENCED TO THE CENTER OF STRUCTURES.
- MATERIALS:
1. REINFORCED CONCRETE PIPE (RCP) SHALL MEET THE REQUIREMENTS OF ASTM C-76, CLASS II, WALL THICKNESS "B", LATEST REVISION. RUBBER GASKETS OR OTHER MANUFACTURER SUPPLIED JOINT SEALERS SHALL BE USED.
2. PUSH-ON DRAINAGE PIPE AND FITTINGS SHALL BE NON-PRESSURE POLYVINYL CHLORIDE (PVC) PIPE CONFORMING TO ASTM D 3034, SDR 35, WITH PUSH-ON RUBBER GASKET JOINTS.
3. ALL HIGH DENSITY POLYETHYLENE PIPE AND FITTINGS SHALL MEET THE REQUIREMENTS OF ASTM F2641 AND AASHTO M - 294 LATEST REVISIONS. ALL PIPING TO BE NON-PERFORATED TUBING.
- INSTALLATION:
1. PIPE SHALL BE INSTALLED PER MANUFACTURERS SPECIFICATIONS
2. BEDDING AND INITIAL BACKFILL OVER STORM DRAINAGE PIPES SHALL BE PER MANUFACTURERS SPECIFICATIONS OR AHI SPECIFICATIONS IF A PUBLIC PIPE.
- CONNECTIONS TO EXISTING STORM STRUCTURES:
1. THE HOLE INTO THE EXISTING STRUCTURE SHALL BE SAW CUT OR CORE DRILLED AND MEET THE AUTHORITY HAVING JURISDICTIONS (AHJ) DETAIL IF CONNECTING TO A PUBLIC STRUCTURE.
2. USE NON-SHRINKING GROUT TO FILL ALL GAPS AROUND THE JOINT.
3. AFTER PIPE IS CONNECTED WITH THE INLET, THE END OF THE PIPE MUST BE CUT FLUSH WITH THE INSIDE SURFACE OF THE INLET.
4. REFER TO F.D.O.T. STANDARD PLAN INDEX 425-001 FOR FILTER FABRIC WRAP ON GROUTED PIPE TO STRUCTURE JOINT DETAIL.

LEGEND

GRADING PLAN

PROP PROPERTY LINE

PROP MILLING & RESURFACING

PROP CONCRETE SIDEWALK

PROP PAVER SIDEWALK

PROP SPOT ELEVATION

EX STORM SEWER

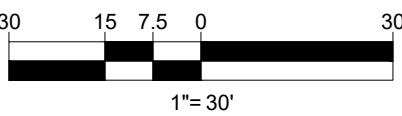
PROP STORM SEWER

PROP GRATE INLET

PROP STORM CLEANOUT

PROP STORM MANHOLE

RIDGE LINE



REVISIONS

[illegible]

PRELIMINARY

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PROJECT:

**PRELIMINARY
ENGINEERING
PLANS**

FOR —

UNITED
MANAGEMENT

PROPOSED DEVELOPMENT

501 LAKE AVE
CITY OF LAKE WORTH BEACH
LAKE WORTH BEACH, FL

BOHLER//

1900 NW CORPORATE BOULEVARD
SUITE 1015

BOCA RATON, FLORIDA 3343

Phone: (561) 571-0280
Fax: (561) 571-0281

FLORIDA BUSINESS CERT. OF AUTH. No. 307

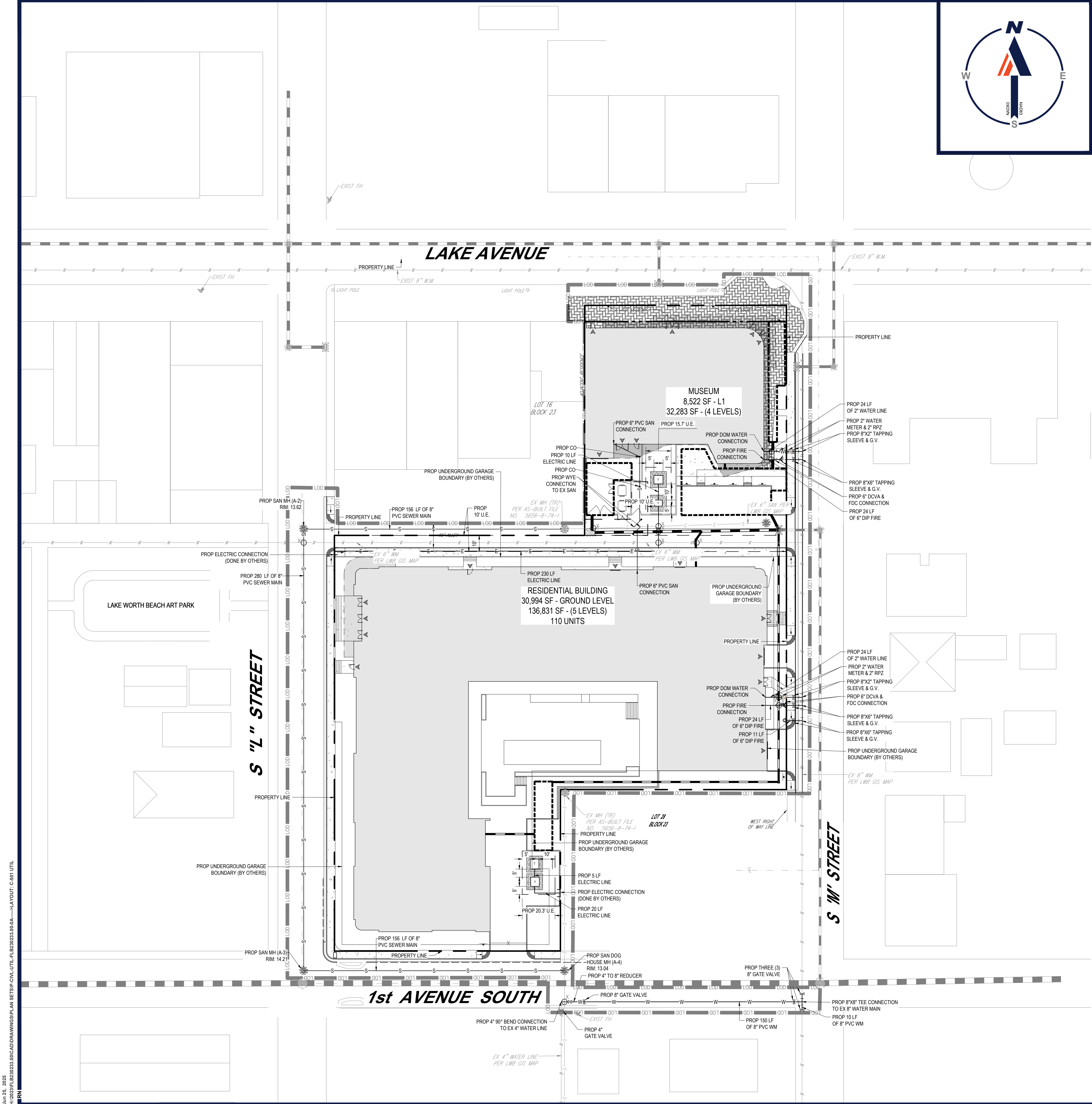
SHEET TITLE

GRADING AND DRAINAGE PLAN

SHEET NUMBER

C-401

ORG. DATE - 6/25/2025



GENERAL NOTE

- 1. THE CONTRACTOR MUST BE FAMILIAR WITH ALL NOTES ON THE GENERAL NOTES SHEET.
- 2. ALL ON-SITE WATER AND SEWER DISTRIBUTION/COLLECTION LINES MAINS TO BE PRIVATELY OWNED & MAINTAINED UNLESS OR UNTIL A UTILITY EASEMENT IS DESCRIBED & APPROVED BY ALL INVOLVED PARTIES.
- 3. ALL POTABLE WATER, RECLAIMED WATER, AND SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPROVED CONSTRUCTION PLAN.
- 4. FDEP WATER AND WASTEWATER PERMITS MUST BE OBTAINED PRIOR TO BEGINNING CONSTRUCTION.
- 5. PROPER DOCUMENTATION FOR ALL PUBLIC UTILITY EASEMENTS SHALL BE PROVIDED TO THE PROPERTY MANAGEMENT DEPARTMENT PRIOR TO CERTIFICATE OF COMPLETION.
- 6. UTILITY RECORD DRAWINGS ARE REQUIRED PRIOR TO PLACING THIS WATER AND WASTEWATER FACILITIES INTO SERVICE. CONTRACTOR TO VERIFY REQUIREMENT WITH LOCAL AUTHORITY HAVING JURISDICTION (AHJ) PRIOR TO START OF CONSTRUCTION.

PRIVATE SANITARY SEWER NOTES

- A. GENERAL:
 - 1. DISTANCE AND LENGTHS SHOWN ON PLANS AND PROFILE DRAWINGS ARE REFERENCED TO THE CENTER OF STRUCTURES.
 - 2. PRIOR TO COMMENCING CONSTRUCTION, CONTRACTOR TO CAMERA EXISTING SANITARY SEWER LINE FROM POINT OF CONNECTION THROUGH THE NEXT SEQUENTIAL DOWNSTREAM RUN OF PIPE. ADDITIONALLY, PRIOR TO COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL CAMERA THE NEWLY INSTALLED SANITARY SEWER MAIN TO ENSURE NO DIPS OR DEBRIS WITHIN LINE.
 - 3. ANY EXISTING SERVICES BEING DISRUPTED SHALL BE REPLACED AND RECOVERED.
 - 4. BYPASS PUMPING MAY BE REQUIRED AND SANITARY SERVICE MAINTAINED WHILE EXISTING SEWER IS BEING REPLACED. THE BYPASS PUMP DESIGN IS OUTSIDE OF BOHLERS SCOPE OF WORK.
 - 5. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY AUTHORITY WITH MAKING CONNECTION TO PUMP STATION / MANHOLE.
 - 6. CONTRACTOR MUST COORDINATE WITH UTILITY AUTHORITY(IES) AND PROPERTY OWNER(S) AND PROVIDE AT LEAST 48-HOURS NOTICE PRIOR TO REPLACING SERVICES.
- B. MATERIALS:
 - 1. UNLESS OTHERWISE REQUIRED BY THE AHJ, ALL PVC SEWER PIPE AND FITTINGS SHALL BE NON-PRESSURE POLYVINYL CHLORIDE (PVC) PIPE CONFORMING TO ASTM D 3034, SDR 26, WITH PUSH-ON RUBBER GASKET JOINTS.
 - 2. ALL FITTINGS AND ACCESSORIES SHALL BE PER PLANS, AHJ SPECIFICATIONS, OR APPROVED EQUAL.
 - 3. ALL SANITARY CLEANOUTS WITHIN PAVEMENT SHALL HAVE A LID THAT IS H20 LOADING.
- C. INSTALLATION:
 - 1. PIPE AND FITTINGS:
 - a. SEWER PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, AND THE UNI-BELL PLASTICS PIPE ASSOCIATION'S RECOMMENDED PRACTICE FOR THE INSTALLATION OF PVC SEWER PIPE.
 - b. BEDDING AND INITIAL BACKFILL OVER SEWER MAINS AND SERVICES SHALL BE PER AHJ SPECIFICATIONS.
 - 2. CLEANOUTS:
 - a. CLEANOUTS SHALL BE SET PLUMB TO LINE AND GRADE ON FIRM CLEAN SUBGRADE PROVIDING UNIFORM BEARING UNDER THE BASE.
 - b. ALL OPENINGS AND JOINTS SHALL BE SEALED WATER-TIGHT.
 - 3. SERVICE:
 - a. MINIMUM SLOPE OF ALL SERVICE LINES SHALL BE 1.04% FOR 6" PIPES AND 2.08% FOR 4" PIPES.
 - b. EACH SERVICE CONNECTION SHALL BE PLUGGED WATER-TIGHT WITH AN APPROVED PLUG.
 - c. CONNECTION OF SERVICES TO BUILDING'S PLUMBING SHALL BE COORDINATED WITH THE ARCHITECTURAL DRAWINGS.
- D. TESTING:
 - 1. ALL TESTING SHALL CONFORM TO AHJ REQUIREMENTS UNLESS OTHERWISE NOTED

PRIVATE WATER DISTRIBUTION NOTES

- 1. CONTRACTOR SHALL FOLLOW GUIDELINES AND PROCEDURES OUTLINED BY UTILITY PROVIDER, AND HAVE UTILITY PROVIDER'S MANUAL ON-SITE AT ALL TIMES. THIS POLICY MANUAL SHALL BE CONSIDERED PART OF THE CONSTRUCTION DOCUMENTS AS IT PERTAINS TO APPROVED MATERIALS, INSTALLATION METHODS, INSPECTION NOTIFICATION, AND AS-BUILT/PROJECT CLOSEOUT REQUIREMENTS.
- 2. ALL PIPES AND FITTINGS SHALL MEET THE REQUIREMENTS OF ASTM D2241 AND ASTM D3035 LATEST REVISIONS. ALL PIPING TO BE NON-PERFORATED TUBING. IF THE PIPE MATERIAL SPECIFIED OR PROCURED BY THE GC IS NOT GOVERNED BY THE ASTM SPECIFICATIONS NOTED, IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL MANUFACTURERS SPECIFICATIONS ARE ADHERED TO.
- 3. CONTRACTOR TO COORDINATE WITH UTILITY AUTHORITY AND ADJACENT PROPERTY OWNERS AND BUSINESSES FOR ANY ANTICIPATED WATER INTERRUPTIONS FOR CONNECTION TO EXISTING WATER LINE.
- 4. CONTRACTOR TO DEFLECT OR BEND WATER LINES AS NECESSARY TO MAINTAIN 12" VERTICAL SEPARATION FROM STORM SEWER PER FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION UNLESS A GREATER CLEARANCE IS REQUIRED BY THE AHJ.

DATUM NOTE

ELEVATIONS ARE BASED ON NAVD83 DATUM DETERMINED BY GPS OBSERVATIONS AND TIED INTO THE NGS BENCHMARK NO. LB 8261 WITH A PUBLISHED ELEVATION OF 12.24 FEET.

FEMA NOTE

THE PROPERTY IS LOCATED IN ZONE X (AREAS OF MINIMAL FLOOD HAZARD) PER MAP ENTITLED "FIRM, FLOOD INSURANCE RATE MAP, MAP NUMBER 12099C0781F, WITH A MAP REVISION DATE OF OCTOBER 5, 2017.

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS				
REV	DATE	COMMENT	DRAWN BY	

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PROJECT No.: FLB2302333.00
DRAWN BY: RN
CHECKED BY: RM
DATE: 02/19/2025
CAD ID: P-CIVIL-UTIL

PROJECT:

PRELIMINARY
ENGINEERING
PLANS

FOR

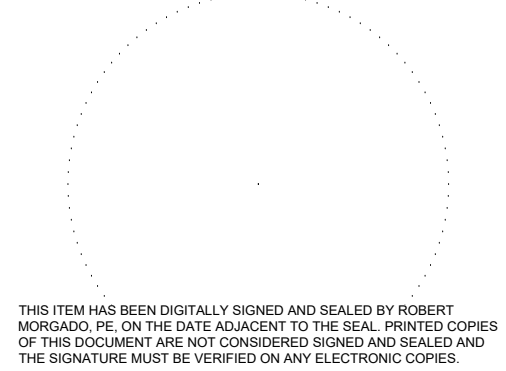
UNITED
MANAGEMENT

PROPOSED
DEVELOPMENT

501 LAKE AVE
CITY OF LAKE WORTH BEACH
LAKE WORTH BEACH, FL

BOHLER

1900 NW CORPORATE BOULEVARD
SUITE 101E
BOCA RATON, FLORIDA 33431
Phone: (561) 571-0280
Fax: (561) 571-0281
FLORIDA BUSINESS CERT. OF AUTH. No. 30780



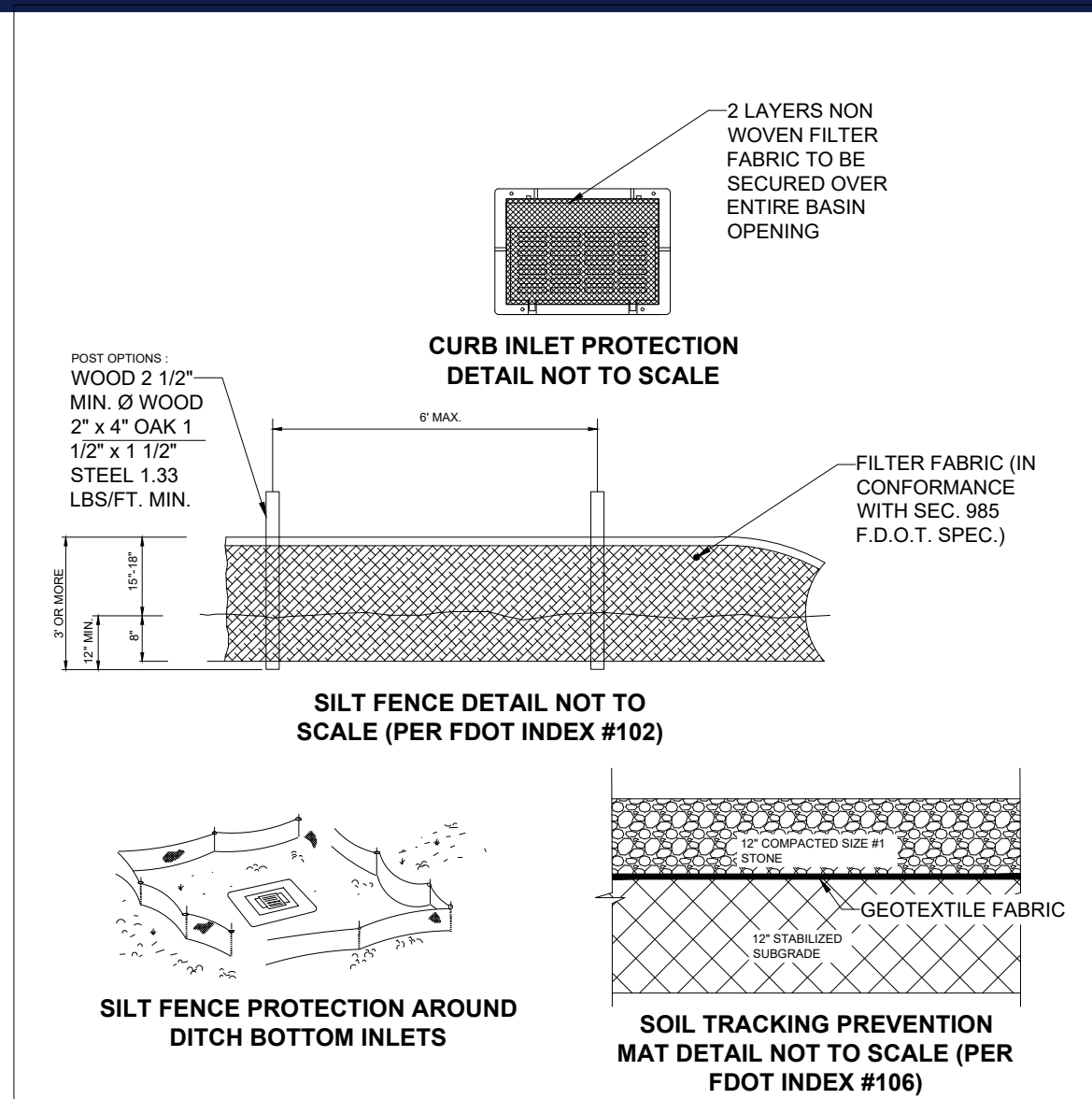
SHEET TITLE:

UTILITY
PLAN

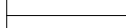
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C-501

ORG. DATE - 6/25/2025



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	<u>LEGEND</u>
ONSITE PROPERTY LINE / R.O.W. LINE	
NEIGHBORING PROPERTY LINE	
EX. EASEMENT	
EX. ROADWAY C/L	
EX. OVERHEAD ELECTRIC	
EX. STORM SEWER	
EX. SANITARY LINE	
EX. FENCE	
EX. SPOT ELEVATION	
EX. CONCRETE	
TO BE REMOVED/ TO BE RELOCATED	
SOIL TRACKING PREVENTION MAT	
PROP. SILT FENCE	
PROP. INLET PROTECTION	
CONC. TO BE REMOVED	
ASPHALT TO BE REMOVED	
EX. TREE TO BE REMOVED	
EX. TREE	

BOHLER

THE
SITE CIVIL AND CONSULTING ENGINEERING

LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS

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DATE:	02/19/2025
CAD I.D.:	P-CIVL-EROS

PROJECT:

**PRELIMINARY
ENGINEERING
PLANS**

FOR

UNITED
MANAGEMENT

PROPOSED DEVELOPMENT

501 LAKE AVE
CITY OF LAKE WORTH BEACH
LAKE WORTH BEACH, FL

BOHLER //

**1900 NW CORPORATE BOULEVARD
SUITE 101E
BOCA RATON, FLORIDA 33431**
Phone: (561) 571-0280
Fax: (561) 571-0281
FLORIDA BUSINESS CERT. OF AUTH. No. 30780

SHEET TITLE:
***EROSION AND
SEDIMENT
CONTROL PLAN
PHASE 1***

SHEET NUMBER:

C-801

ORG. DATE - 6/25/2025



	LEGEND
ONSITE PROPERTY LINE / R.O.W. LINE	
NEIGHBORING PROPERTY LINE	
EX. EASEMENT	
EX. ROADWAY C/L	
EX. OVERHEAD ELECTRIC	
EX. STORM SEWER	
EX. SANITARY LINE	
EX. FENCE	
EX. SPOT ELEVATION	
EX. CONCRETE	
TO BE REMOVED/ TO BE RELOCATED	
SOIL TRACKING PREVENTION MAT	
PROP. SILT FENCE	
PROP. INLET PROTECTION	
CONC. TO BE REMOVED	
ASPHALT TO BE REMOVED	
EX. TREE TO BE REMOVED	
EX. TREE	

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DATE:	02/19/2025
CAD I.D.:	P-CIVL-EROS

PROJECT:

**PRELIMINARY
ENGINEERING
PLANS**

_____ FOR _____

UNITED
MANAGEMENT

**PROPOSED
DEVELOPMENT**

**501 LAKE AVE
CITY OF LAKE WORTH BEACH
LAKE WORTH BEACH, FL**

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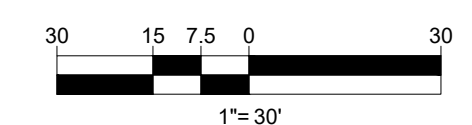
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SHEET TITLE:
***EROSION AND
SEDIMENT
CONTROL PLAN
PHASE 2***

SHEET NUMBER: _____

C-802

ORG. DATE - 6/25/2025



JUN 25, 2025
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PIPE AND VALVE UNDER CONSTRUCTION

TEMPORARY BACKFILL

TEMPORARY FLUSH PIPE AND 45° BEND

NOTES:

- UPON COMPLETION OF THE PIPE INSTALLATION FOR ANY SECTION, THE MAINS SHALL BE PIGGED. CANNON FLUSHING MAY BE USED IN ADDITION TO PIGGING ONLY WITH THE APPROVAL OF THE ENGINEER. CANNON FLUSHING SHALL ACHIEVE A MINIMUM VELOCITY OF 2.5 FEET PER SECOND IN THE PIPE, FITTINGS, ETC.
- INSTALL A 45° BEND AND ASSOCIATED PIPING AS SHOWN TO DIRECT THE FLUSHING WATER AWAY FROM THE IMMEDIATE WORK AREA AND EXERCISE DUE CARE SO AS TO ENSURE THAT THE WATER USED IN FLUSHING DOES NOT CAUSE A NUISANCE OR INFLECT PROPERTY DAMAGE.
- BENDS AND PIPING SHALL BE THE SAME SIZE AS THE LINE TO BE FLUSHED.
- PRIOR TO THE ACTUAL LINE FLUSHING OPERATION, THE CONTRACTOR SHALL PROPERLY NOTIFY THE ENGINEER OF SUCH INTENDED WATER USE.
- NO EXISTING VALVES SHALL BE TURNED ON OR OFF, EXCEPT BY AUTHORIZED UTILITY PERSONNEL.
- PIGGING AND FLUSHING SHALL NOT BE ACCOMPLISHED WITHOUT THE ACTUAL PRESENCE OF THE ENGINEER.
- AFTER THE LINE UNDER CONSTRUCTION HAS BEEN SUCCESSFULLY PIGGED AND FLUSHED, THE CONTRACTOR SHALL REMOVE THE TEMPORARY PIPING ARRANGEMENT AND PROCEED WITH THE REMAINING CONSTRUCTION AS SPECIFIED.

PIGGING AND CANNON FLUSHING

1

PLAN

C.I. COVER MARKED "WATER"

TOP OF PAVEMENT

CONCRETE COLLAR (NON-PAVED AREAS ONLY)

C.I. ADJUSTABLE VALVE BOX (INSIDE SCREW TYPE)

VALVE SETTING

2

2-2 1/2" HOSE NOZZLES

4 1/2" PUMPER NOZZLE FACING ROADWAY

18" MIN. 24" MAX.

FINISHED GRADE

ZINC PLATED STEEL TIE RODS WITH DUC LUGS OR EYE BOLTS.

SEE NOTE 1

6" GATE VALVE

6" D.I.P.

MAIN TEE

6" D.I.P.

18" MIN.

REST. TEE OR TIE RODS

NOTE:

- ON RUNS LONGER THAN 60' ANOTHER VALVE IS REQUIRED.
- MEGALUGS REQUIRED ON ALL JOINTS.

468 FIRE HYDRANT INSTALLATION

3

ZINC PLATED STEEL TIE RODS WITH EYE BOLTS OR DUC LUGS ONLY.

6" GATE VALVE WITH CAST IRON VALVE BOX AND CONCRETE COLLAR

MJ X PE 90° HYDRANT TEE

6" DIP (TYP)

2-2 1/2" HOSE NOZZLES

4 1/2" PUMPER NOZZLE FACING ROADWAY

MJ X MJ TEE

NOTE:

MEGALUGS REQUIRED ON ALL JOINTS.

675 FIRE HYDRANT INSTALLATION PARALLEL TO WATERMAIN

4

DOUBLE STRAP SADDLE AND CORPORATION STOP

CONSTRUCTION METER

RPZ

BY-PASS LINE

DOUBLE STRAP SADDLE AND CORPORATION STOP

WATERMAIN

EXISTING WATERMAIN

VALVE

FITTING FOR CONNECTION TO EXISTING WATERMAIN

- PERFORM PRESSURE AND LEAKAGE TEST ON TAPPING SLEEVE AND TAPPING VALVE (WHEN USED) PRIOR TO MAKING TAP.
- ALL WATER FOR FLUSHING, PRESSURE AND LEAKAGE TESTS, AND BACTERIOLOGICAL CLEARANCE MUST BE FROM THE "BY-PASS" LINE WITH CHECK VALVE IN PLACE.
- DURING ALL PRESSURE AND LEAKAGE TESTS, BOTH CORPORATION STOPS ON THE "BY-PASS" LINE MUST BE CLOSED.
- THE UTILITY COMPANY SUPPLYING THE WATER SHALL BE NOTIFIED BEFORE FILLING AND FLUSHING. ONLY THE UTILITY COMPANY SHALL OPERATE THE VALVES.
- DOUBLE STRAP SADDLES ARE NOT REQUIRED WHEN CONNECTING TO DUCTILE IRON PIPE.
- CONNECT PRESSURE TEST PUMP TO SERVICE LINE OR BLOWOFF. NO EXTRA TAPS ARE PERMITTED UNLESS NEITHER A SERVICE LINE OR BLOWOFF ARE PRESENT IN THE TEST SECTION.
- WATERMAIN VALVES CANNOT BE OPENED UNTIL THE ENTIRE SYSTEM HAS BEEN CLEARED BY THE GOVERNING PERMITTING AGENCY.
- REMOVE THE "BY-PASS" LINE AFTER THE MAIN HAS BEEN CLEARED. PLUG CORPORATION STOP WITH THREADED BRASS PLUG.
- INSTALL ADJUSTABLE CAST IRON VALVE BOX ON THE VALVE.
- RESTRAIN PIPE ONE JOINT EITHER DIRECTION ON EXISTING PIPE.

5 TIE-IN JUMPER CONNECTION

FINISH GRADE

36" MIN. COVER

SEE RESTRAINED JOINT DETAIL

DOWN BEND (TYPICAL) 22 1/2° BEND PREFERRED 45° BEND ACCEPTABLE

CONFLICT PIPE

RESTRAINED JOINT

36" MIN. COVER

12" MIN. CLEAR

SEE NOTE No. 5

10' 10'

DUCTILE IRON PIPE

ZINC PLATED STEEL TIE RODS WITH SOCKET CLAMP OR ANCHOR TYPE ENDS.

ALL RESTRAINED JOINTS

FITTING TYPE JOINTS

FINISH GRADE

36" MIN. COVER

CONFLICT PIPE

SEE NOTE No. 4 FOR ACCEPTABLE DEFLECTION

12" MIN. CLEAR

SEE NOTE No. 5

10' 10'

DUCTILE IRON PIPE

SLOPE UP TO MIN. COVER

DEFLECTION TYPE JOINTS PREFERRED METHOD

NOTES:

- THERE SHALL BE, IN ALL CASES, A MINIMUM OF 12" SEPARATION BETWEEN WATER MAINS AND FORCE MAINS.
- WHEREVER POSSIBLE WATER MAINS SHALL PASS OVER FORCE MAINS OR STORM SEWERS.
- FITTINGS SHALL BE RESTRAINED WITH MEGALUGS AND TIE RODS BETWEEN OFFSET FITTINGS. THRUST BLOCKS SHALL ONLY BE USED WITH THE APPROVAL OF THE ENGINEER.
- THE DEFLECTION TYPE CROSSING IS PREFERRED. SEE SPECIFICATIONS AND MANUFACTURER'S SUBMITTAL FOR MAXIMUM DEFLECTION ALLOWED.
- A MINIMUM OF 12" VERTICAL SEPARATION BETWEEN WATER MAINS AND STORM SEWERS SHALL BE MAINTAINED, WHERE THIS IS NOT POSSIBLE WATER MAIN SHALL BE D.I.P. WITH NO LESS THAN 6" SEPARATION.

6 PRESSURE PIPE CONFLICT

11 1/4', 22 1/2' & 45° BENDS

TEE

90° BEND

VALVE

REDUCER

DEAD END

NOTES:

- LENGTH "L" IS IN FEET.
- RESTRAINED LENGTHS ARE BASED ON THE FOLLOWING:
 - A. 150 PSI TEST PRESSURE
 - B. MIN. 30" COVER.
 - C. PVC - PIPE SIZES 4" - 12".
 - D. DI - PIPE SIZES 4" - 48".
 - E. SANDY SOIL.
 - F. SAFETY FACTOR OF 1.5.
- LENGTH "L" SHOWN IN THE TABLE TO BE RESTRAINED IN THE DIRECTION OF THE ARROWS.

468 RESTRAINED PIPE JOINTS

7

FITTING TYPE	PIPE SIZE															
	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"		
90° HORIZ. BEND	17	22	28	36	44	53	61	71	80	89	96					
45° HORIZ. BEND	17	22	28	36	44	53	61	71	80	89	96					
22.5° HORIZ. BEND	5	6	8	10	12	14	16	18	20	22	25	29	33	40		
11.25° HORIZ. BEND	2	2	3	3	4	4	5	5	6	6	7	8	9	10		
45° VERT. OFFSET	19	27	35	42	50	59	67	77	86	95						
22.5° VERT. OFFSET	5	6	8	10	12	14	15	17	19	23	26	29	32			
11.25° VERT. OFFSET	2	2	3	3	4	4	5	5	6	6	7	8	9	10		
DEAD END AND INLINE VALVE	48	65	82	100	120	144	171	201	234	270	309	351	396	444		
TEE (BRANCH RESTRAINT)	4"x	21	28	36	44	53	61	71	80	89	96					
	6"x	39	52	65	80	96	113	131	150	171	194					
	8"x	59	77	96	117	141	167	194	225	259	294					
	10"x	79	104	129	156	186	219	254	291	330	371					
	12"x	99	131	163	198	237	279	324	371	420	471					
	14"x	119	156	194	237	284	333	384	437	492	549					
	16"x	139	181	225	273	324	377	432	489	548	609					
	18"x	159	205	254	306	361	418	477	537	599	663					
	20"x	179	229	281	336	393	452	513	575	639	705					
	24"x	219	281	344	411	480	551	624	699	775	853					
REDUCER (LARGER PIPE RESTRAINT)	6"x	34	41	49	57	66	75	84	94	104	114					
	8"x	61	74	88	103	119	136	153	171	190	209					
	10"x	85	103	123	144	166	189	213	238	264	291					
	12"x	109	131	156	183	211	240	270	301	333	366					
	14"x	133	161	191	222	254	287	321	356	392	429					
	16"x	157	190	223	259	296	334	373	413	454	496					
	18"x	181	219	259	301	343	386	430	475	521	568					
	20"x	205	247	291	336	381	427	474	521	569	617					
	24"x	249	297	347	399	451	504	557	611	666	721					
	30"x	309	366	423	481	539	598	657	717	777	837					
36"x	369	432	495	559	623	687	751	815	880	944						
42"x	429	501	565	629	693	757	821	885	949	1013						
48"x	489	567	633	699	765	831	897	963	1029	1095						

675 MECHANICAL THRUST RESTRAINT - MINIMUM PIPE LENGTHS

8

EXISTING GROUND

ALTERNATE FOR MACHINE EXCAVATION AND OVER-EXCAVATION

4" MIN. SAND/GRAVEL BACKFILL

LIMIT FOR MACHINE EXCAVATION

4" HAND EXCAVATION

6"

W = PIPE O.D. + 24"

12" MAX.

12" MAX.

PIPELINE

NOTE: FOR PLACEMENT OF BACKFILL MATERIAL SEE SPECIFICATIONS.

PROVIDE A MINIMUM OF 36 INCHES (FOR PVC) OR 30 INCHES (FOR DIP) OF COVER UNLESS NOTED OTHERWISE ON PLANS.

HAND PLACED SELECT MATERIAL (COMPACTED IN 6" LIFTS)

LOWER QUADRANT TO BE SHAPED TO RECEIVE PIPE BELL AND BARREL

9 TRENCHING

3/4" COPPER TUBING TYPE "K" OR POLYETHYLENE TUBING TO LOCKING BALL VALVE.

24" MIN.

EXISTING GRADE

BACKFILL EXCAVATED HOLE TO GRADE PRIOR TO DISCHARGING ANY WATER ON THE GROUND.

CORPORATION STOP - AFTER SAMPLING IS COMPLETE, TURN CORPORATION STOP OFF, REMOVE TUBING AND PLUG CORPORATION STOP WITH BRASS PLUG.

DOUBLE STRAP TAPPING SADDLE WITH ANWA THREADS. NO DIRECT TAPS ARE PERMITTED.

WATER MAIN

10 SAMPLING POINT

FIRE HYDRANT

FINISHED GRADE

2 1/2" SCH. 80 PVC CAP WITH 3/4" OUTLET

3/4" SCH. 40 PVC OR COPPER

GATE VALVE

2'-0" MIN.

11 SAMPLE POINT ON FIRE HYDRANT

FILL PIPE WITH CONCRETE (CROWN TO SHED WATER)

4" DIA. SCH. 40 PIPE PER A.S.T.M. A-53 & HOT DIPPED GALV. PER A.S.T.M. A-123

CROWN TO SHED WATER

GRADE

CONCRETE ANCHOR

NOTE: LOCATION OF GUARD POSTS TO BE AS DIRECTED BY THE ENGINEER.

12 GUARD POST

TM

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
PROGRAM MANAGEMENT
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**PRELIMINARY
ENGINEERING
PLANS**

FOR

**UNITED
MANAGEMENT**

PROPOSED
DEVELOPMENT

501 LAKE AVE
CITY OF LAKE WORTH BEACH
LAKE WORTH BEACH, FL

BOHLER

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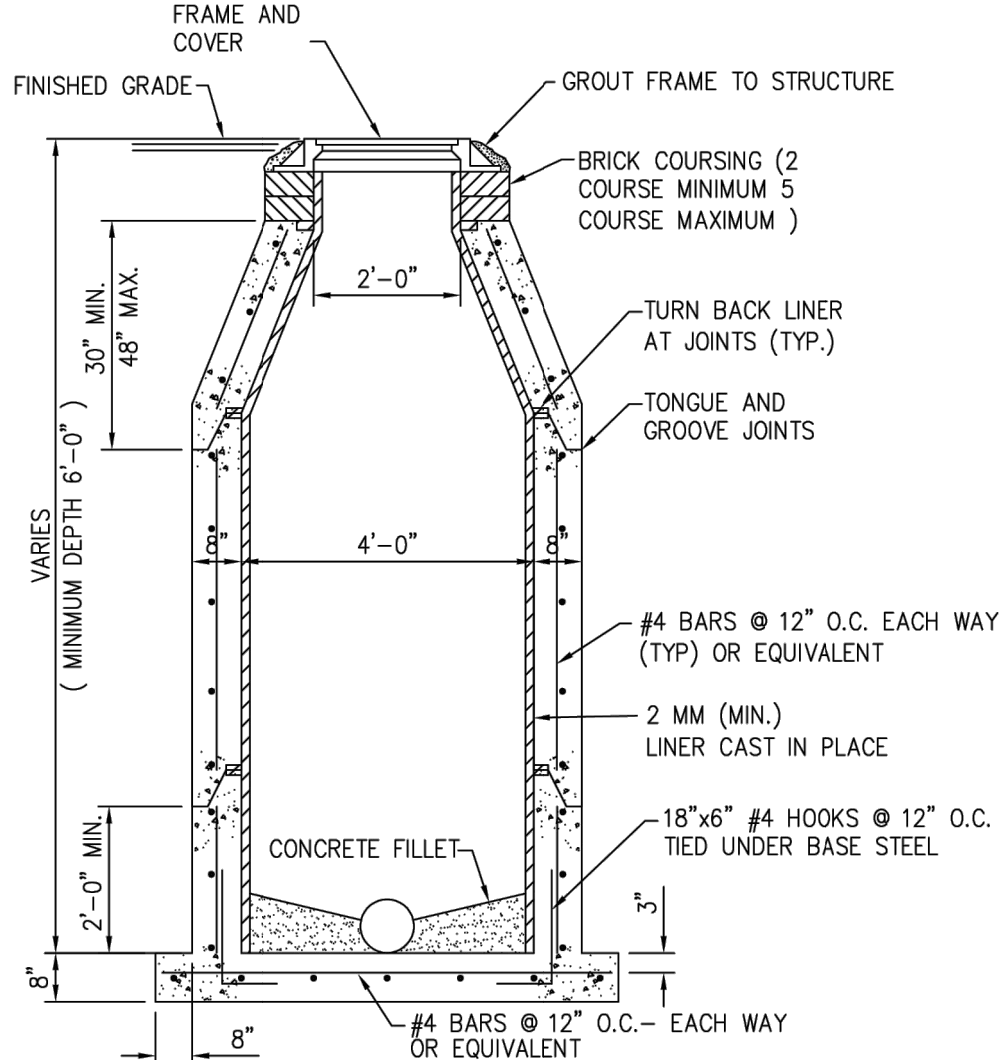
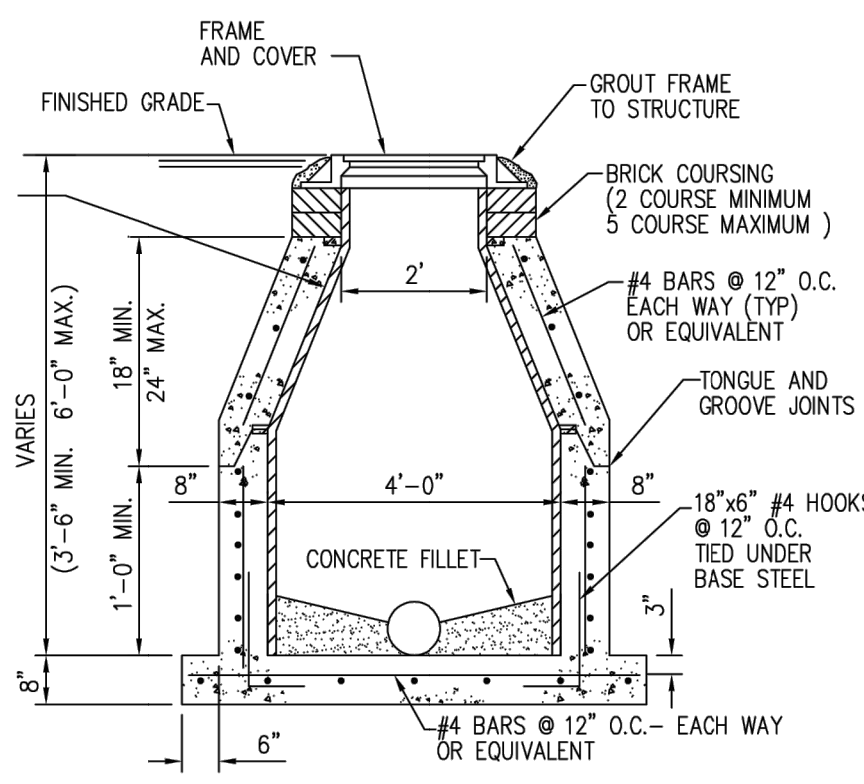
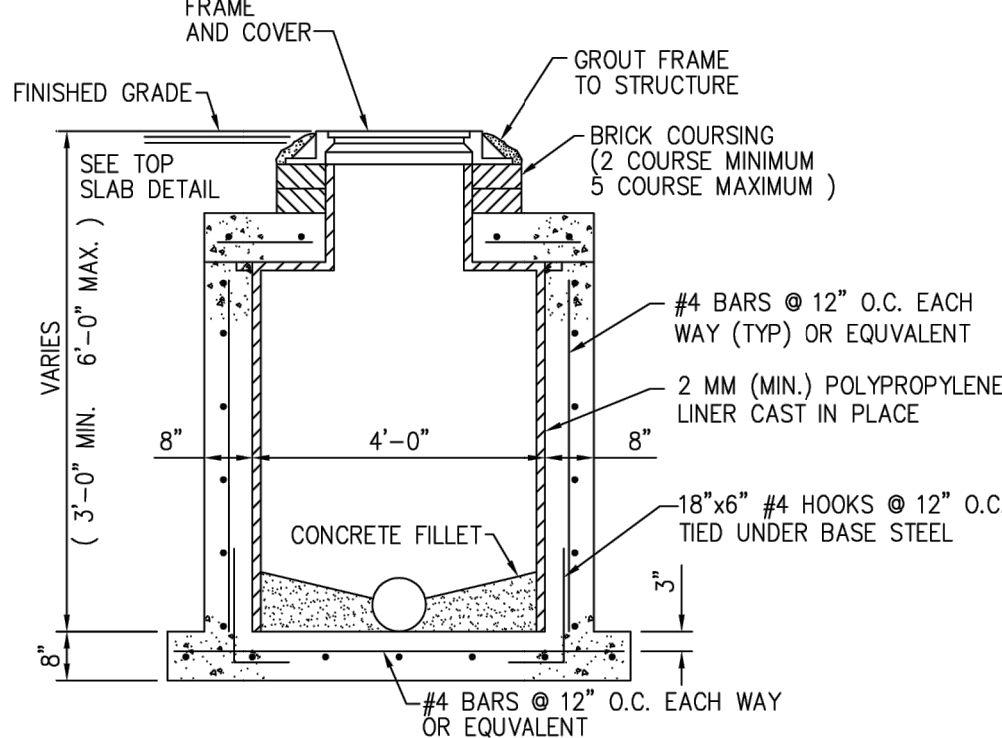
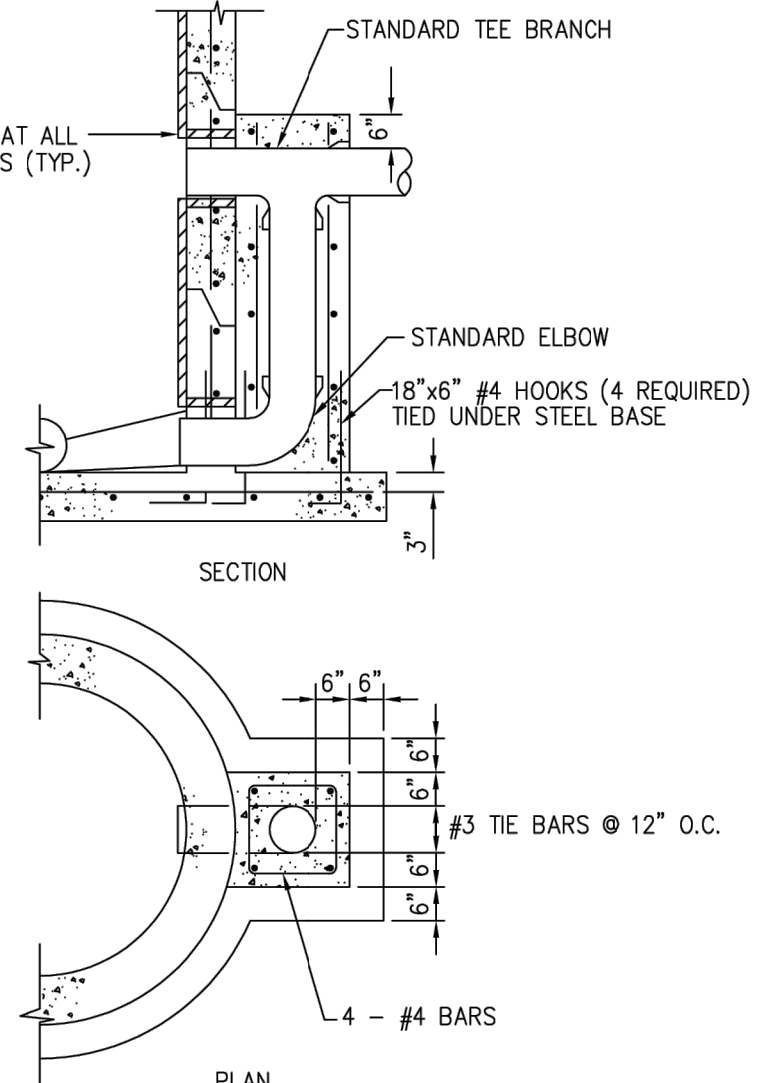
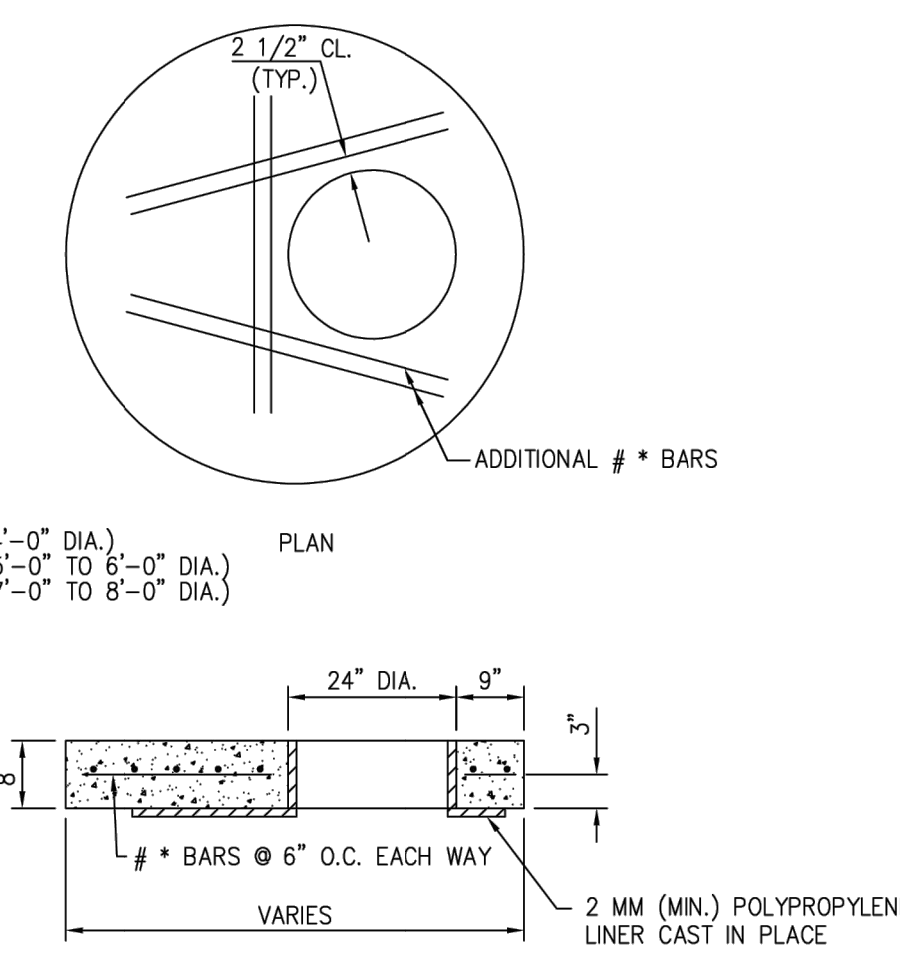
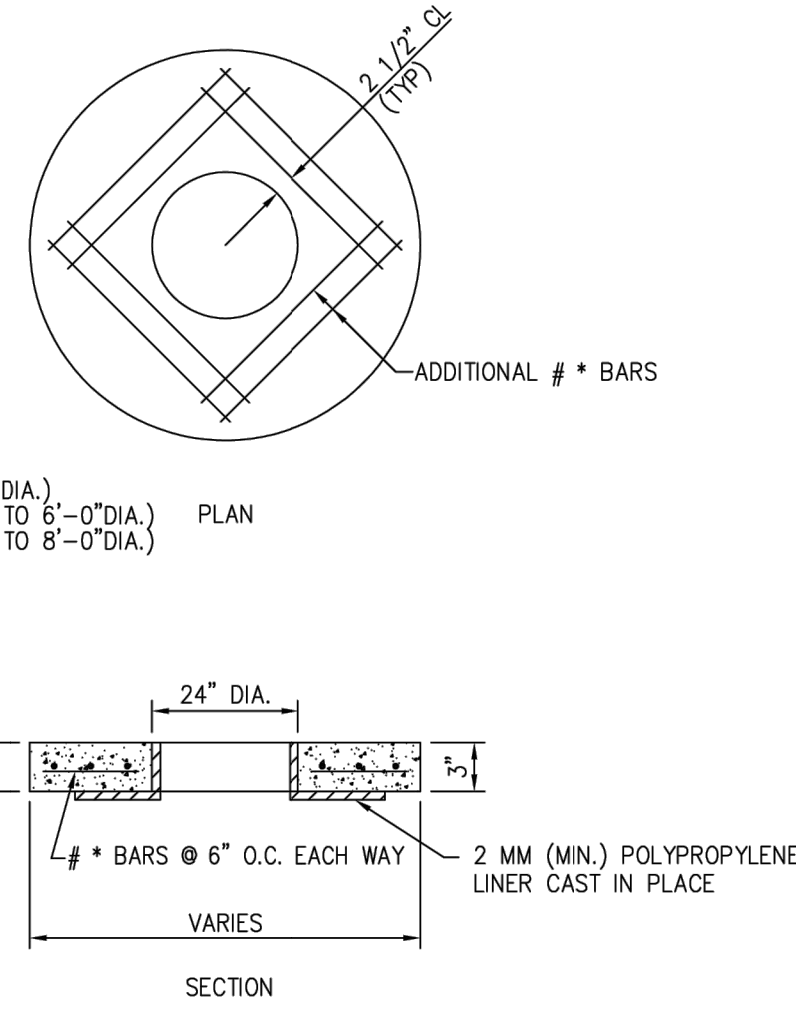
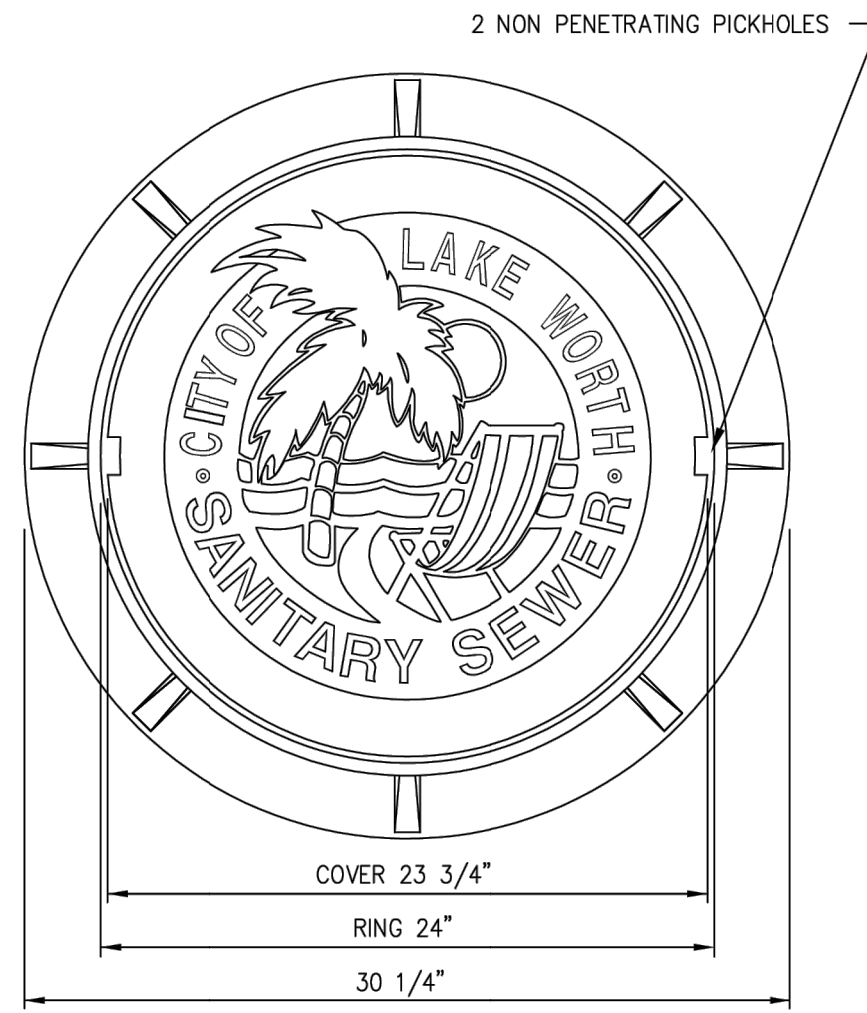
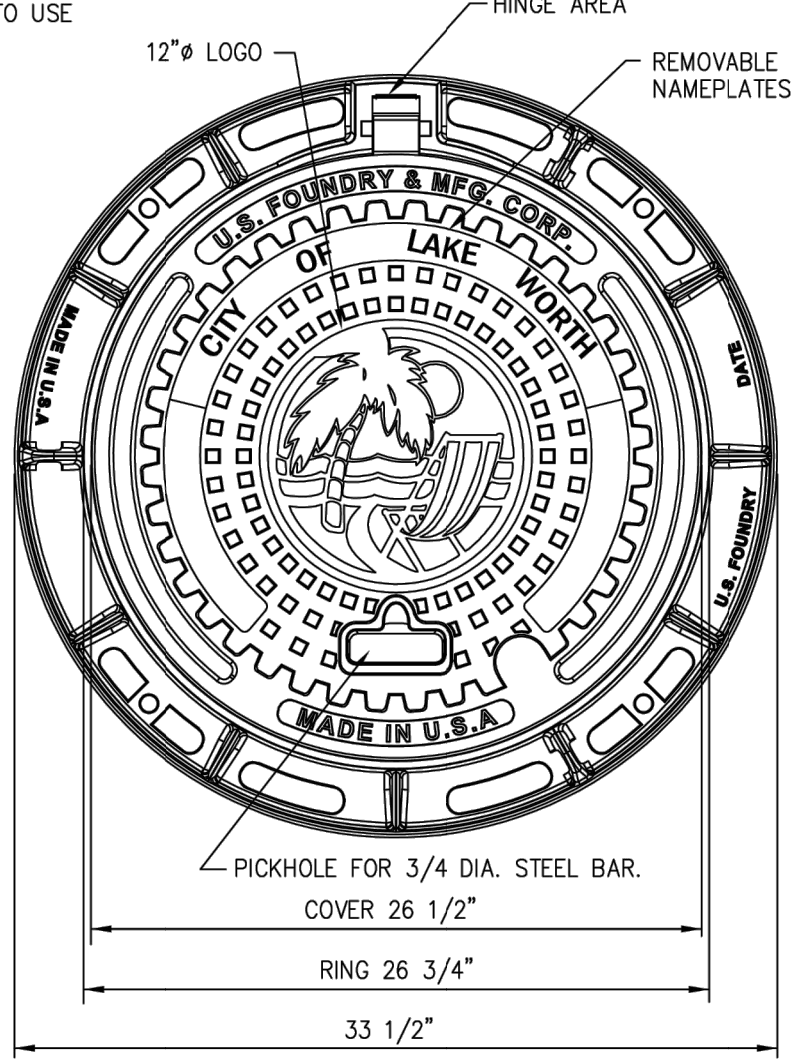
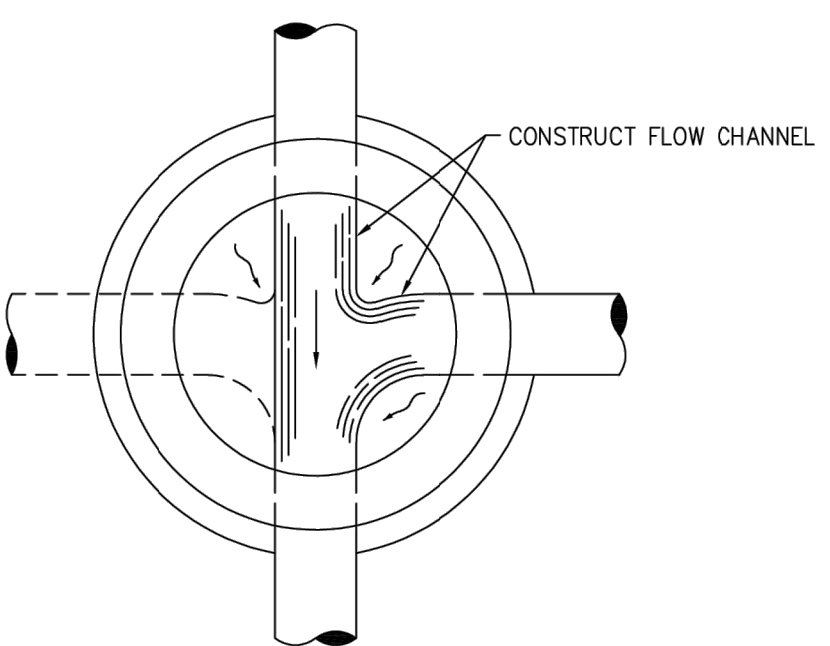
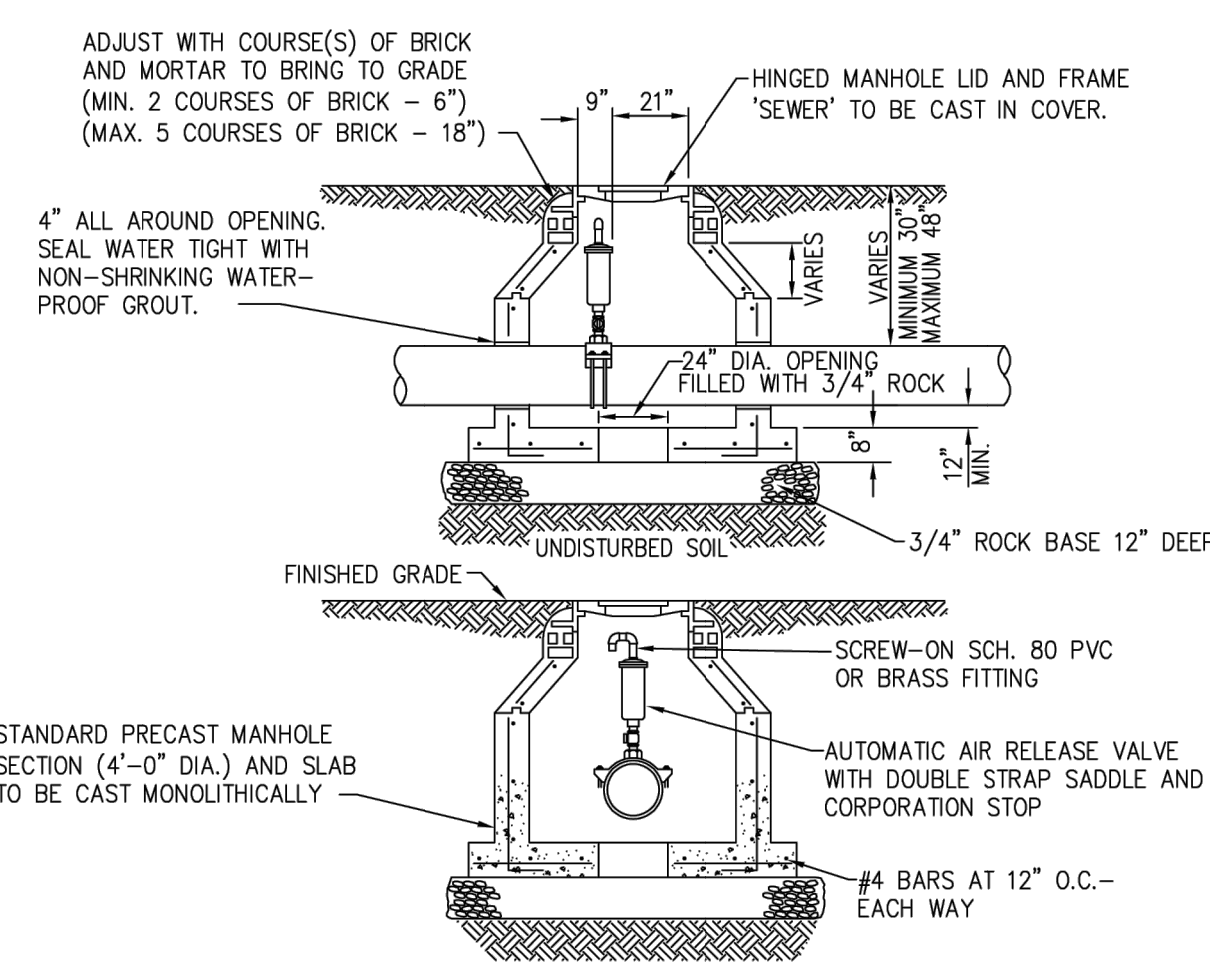
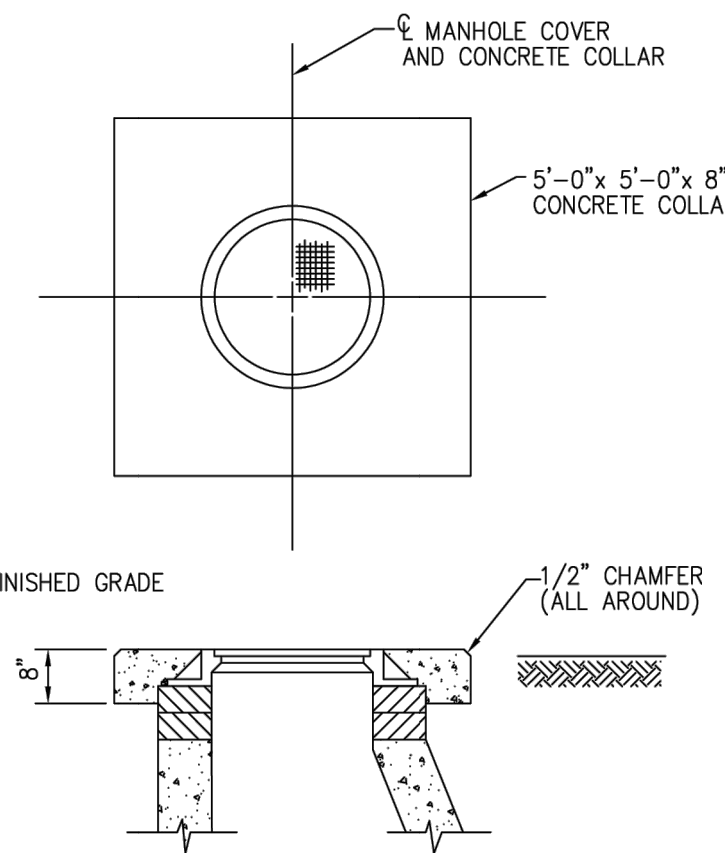
**CONSTRUCTION
DETAILS**

SHEET NUMBER:

C-901

ORG. DATE - 6/25/2025

Jun 25, 2025
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	1		2		3		4
	5		6		7		8
	9		10		11	- REINFORCING STEEL ON ALL CONCRETE STRUCTURES SHALL HAVE A MINIMUM COVER OF 3 INCHES. - BRICK COURSING ON MANHOLES SHALL BE PLASTERED WITH 1/2 INCH CEMENT MORTAR ON THE INSIDE AND OUTSIDE FACES. - THE DISTANCES AND CONTROLS SHOWN ON THE DRAWINGS REFER TO THE CENTERLINE OF THE MANHOLES. - COAT EXTERIOR AND INTERIOR SURFACES OF MANHOLES. PROVIDE A MINIMUM DRY FILM THICKNESS OF 16 MILS. APPLY IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. INTERIOR COATING SHALL BE FIELD APPLIED AFTER FINAL LAMPING AND REVIEW BY THE ENGINEER. - STEPS ARE REQUIRED IN MANHOLES GREATER THAN 3 FEET IN DEPTH. STEPS SHALL BE SPACED 16 INCHES ON CENTER AND SHALL BE POLYPROPYLENE PLASTIC COATED NO.3 AS MANUFACTURED BY MA INDUSTRIES, INC. OR EQUAL APPROVED BY THE ENGINEER. - PVC FORCE MAIN PIPE SHALL BE WRAPPED WITH WIRE FOR LOCATING PURPOSES. A 14 GAUGE, THIN INSULATED, SOLID COPPER WIRE SHALL BE LAID IN THE PIPE TRENCH CONTINUOUS FROM VALVE BOX TO VALVE BOX. WIRE SHALL BE WRAPPED TWO TIMES AROUND EACH JOINT OF PIPE AND EXTENDED INSIDE EACH VALVE BOX TO ENABLE LOCATION DEVICES TO BE ATTACHED WITHOUT DIGGING UP THE VALVE BOX. WIRE CONNECTIONS SHALL BE MADE WITH COMMERCIAL CONNECTORS AND SEALED AGAINST MOISTURE WITH SCOTCH E-Z SEAL NO.2200 ELECTRICAL INSULATING PAD WITH VINYL BACKING. - DROP CONNECTIONS ON MANHOLES ARE REQUIRED WHENEVER AN INFLUENT SEWER IS LOCATED 2 FEET OR MORE ABOVE THE MAIN INVERT CHANNEL. - CAST IRON MANHOLE COVERS SHALL HAVE THE WORD 'SANITARY' CAST IN THEM IN RAISED LETTERS.	12

REVISIONS

REV	DATE	COMMENT	DRAWN BY	CHECKED BY

PRELIMINARY

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT OR BIDDING UNLESS INDICATED OTHERWISE.

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PLANS

FOR

UNITED
MANAGEMENT

PROPOSED
DEVELOPMENT

501 LAKE AVE
CITY OF LAKE WORTH BEACH
LAKE WORTH BEACH, FL

BOHLER

1900 NW CORPORATE BOULEVARD
SUITE 101E
BOCA RATON, FLORIDA 33431
Phone: (561) 571-0200
Fax: (561) 571-0281
FLORIDA BUSINESS CERT. OF AUTH. No. 30780

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