

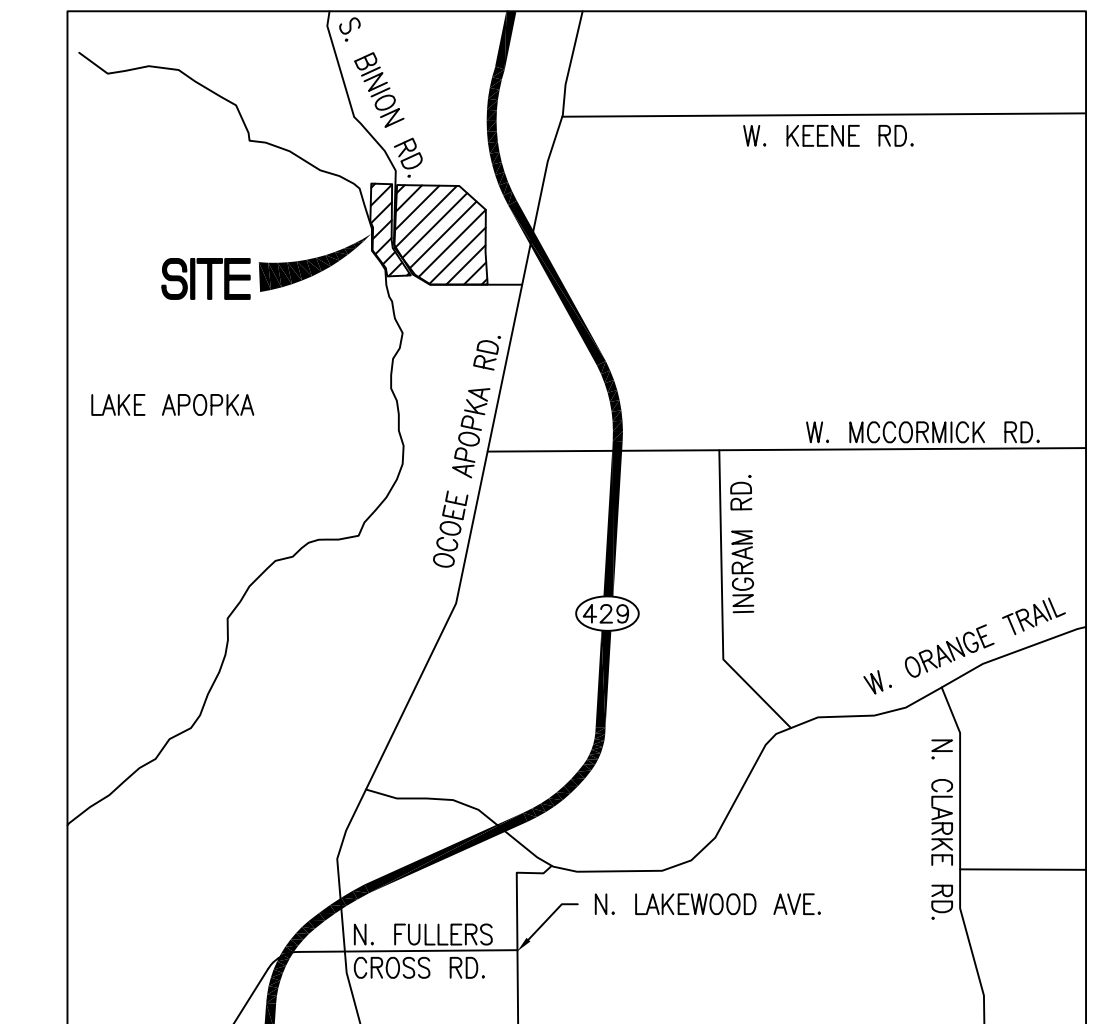
LEGAL DESCRIPTION:

A PORTION OF SECTION 30, TOWNSHIP 21 SOUTH, RANGE 28 EAST, LYING IN ORANGE COUNTY, FLORIDA.
MAGNOLIA PARK CAMPGROUND LOCATED IN SECTION 30, TOWNSHIP 21 SOUTH, RANGE 28 EAST, ORANGE COUNTY, FLORIDA.

MAGNOLIA PARK AND ECO TOURISM UTILITY EXTENSION

ORANGE COUNTY, FLORIDA

PARCEL ID NO. 30-21-28-0000-00-007
2928 S. BINION RD., ORLANDO, FL 32802
2929 S. BINION RD., ORLANDO, FL 32802



LOCATION MAP
SCALE: NTS

OWNER

ORANGE COUNTY PARKS & RECREATION
4801 WEST COLONIAL DR.
ORLANDO, FL 32808
(407) 836-6200

PLANNERS + ENGINEERS

SK CONSORTIUM, INC.
1053 N. ORLANDO AVE., SUITE 3
MAITLAND, FL 32751
(407) 629-4288

SURVEYORS

SOUTHEASTERN SURVEYING & MAPPING
2600 E. ROBINSON ST.
ORLANDO, FL 32803
(407) 898-7780

UTILITY PROVIDERS

ELECTRIC - DUKE ENERGY
WATER - CITY OF APOPKA
SEWER - CITY OF APOPKA

TERESA JACOBS

COUNTY MAYOR

ORANGE COUNTY BOARD OF COUNTY COMMISSIONERS

BETSY VANDERLEY

DISTRICT 1

ROD A. LOVE

DISTRICT 2

PETE CLARK

DISTRICT 3

JENNIFER THOMPSON

DISTRICT 4

EMILY BONILLA

DISTRICT 5

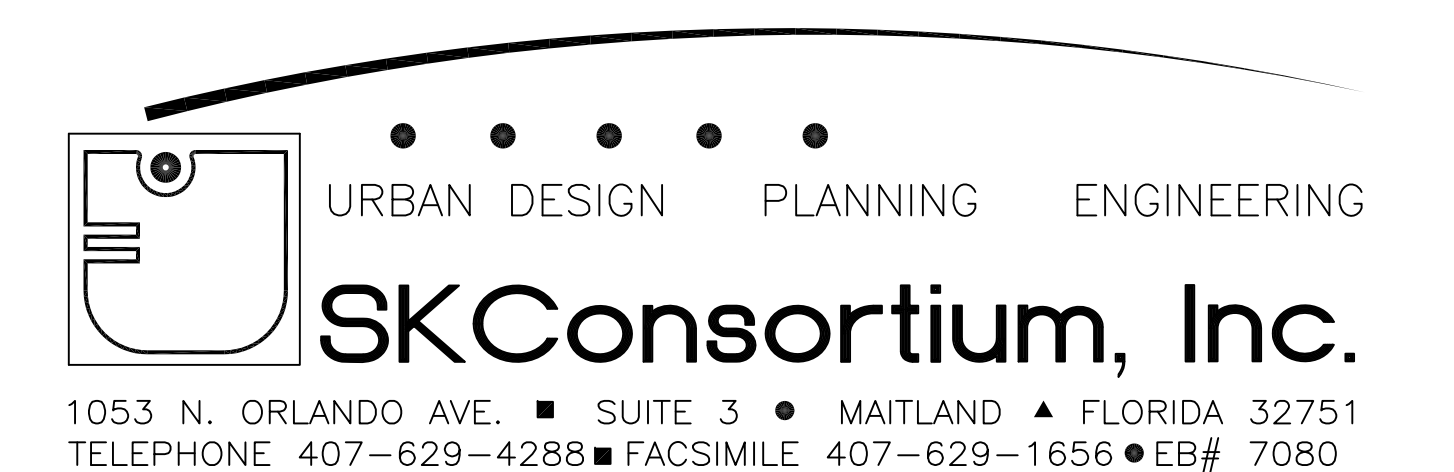
VICTORIA P. SIPLIN

DISTRICT 6

INDEX OF DRAWINGS

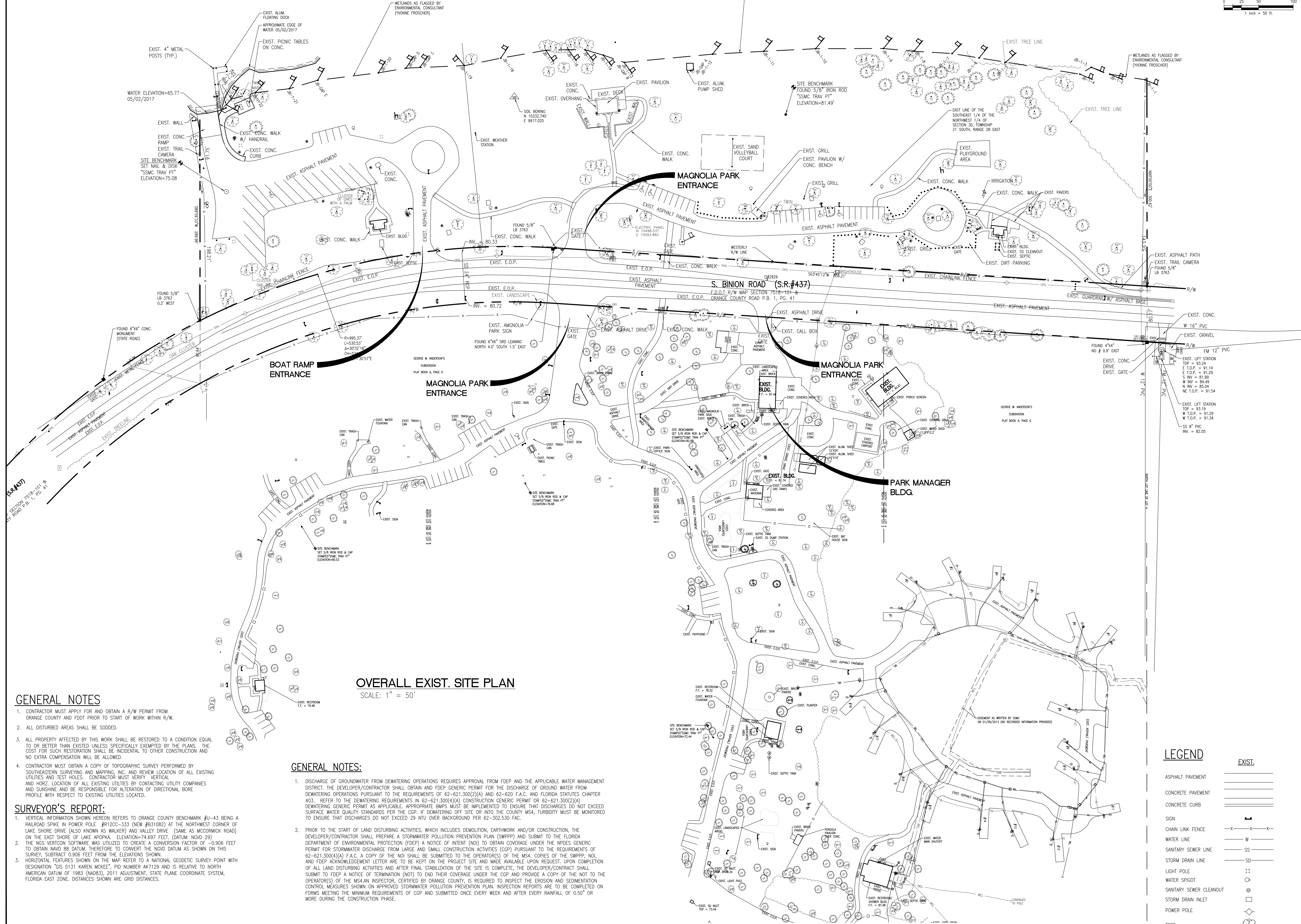
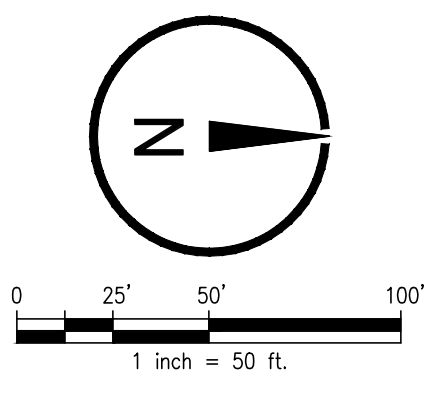
| | |
|-----------|---|
| CS1 | -COVER SHEET |
| C001 | -OVERALL EXIST. SITE PLAN |
| C002-C004 | -SITE DEMOLITION & EROSION CONTROL PLAN |
| C300 | -CITY OF APOPKA GENERAL UTILITY NOTES |
| C301-C303 | -UTILITY PLAN |
| C401-C403 | -CITY OF APOPKA UTILITY DETAILS |
| C404-C405 | -LIFT STATION DETAILS |
| E001 | -ELECTRICAL NOTES & LEGEND |
| E301 | -ELECTRICAL PANEL SCHEDULE |
| ES101 | -ELECTRICAL SITE PLAN |

100% BID SET SET 1-19-19



LAKE APOPKA
 NORMAL HIGH WATER LINE = 68.0 (NGVD)
 ORDINARY LOW WATER LINE = 66.0 (NGVD)
 100 YR FLOOD ELEVATION = 69.20 (NGVD)

LAKE APOPKA
 NORMAL HIGH WATER LINE = 68.0 (NGVD)
 ORDINARY LOW WATER LINE = 66.0 (NGVD)
 100 YR FLOOD ELEVATION = 69.20 (NGVD)



OVERALL EXIST. SITE PLAN
 SCALE: 1" = 50'

GENERAL NOTES

1. CONTRACTOR MUST APPLY FOR AND OBTAIN A R/W PERMIT FROM ORANGE COUNTY AND FOOT PRIOR TO START OF WORK WITHIN R/W.
2. ALL DISTURBED AREAS SHALL BE SOODED.
3. ALL PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTED UNLESS SPECIFICALLY EXEMPTED BY THE PLANS. THE COST FOR SUCH RESTORATION SHALL BE INCIDENTAL TO OTHER CONSTRUCTION AND NO EXTRA COMPENSATION WILL BE ALLOWED.
4. CONTRACTOR MUST OBTAIN A COPY OF TOPOGRAPHIC SURVEY PERFORMED BY SOUTHEASTERN SURVEYING AND MAPPING, INC. AND REVIEW LOCATION OF ALL EXISTING UTILITIES AND TEST HOLES. CONTRACTOR MUST VERIFY VERTICAL AND HORIZ. LOCATION OF ALL EXISTING UTILITIES BY CONTACTING UTILITY COMPANIES AND SUNSHINE AND BE RESPONSIBLE FOR ALTERATION OF DIRECTIONAL BORE PROFILE WITH RESPECT TO EXISTING UTILITIES LOCATED.

SURVEYOR'S REPORT:

1. VERTICAL INFORMATION SHOWN HEREON REFERS TO ORANGE COUNTY BENCHMARK #U-43 BEING A RAILROAD SPIKE IN POWER POLE #R12CC-333 (NEW #831082) AT THE NORTHWEST CORNER OF LAKE SHORE DRIVE (ALSO KNOWN AS WALKER) AND VALLEY DRIVE (SAME AS MCCORMICK ROAD) ON THE EAST SHORE OF LAKE APOPKA. ELEVATION=74.697 FEET. (DATUM: NGVD 29)
2. THE NSI VERTCON SOFTWARE WAS UTILIZED TO CREATE A CONVERSION FACTOR OF -0.906 FEET TO OBTAIN NAVD 88 DATUM. THEREFORE TO CONVERT THE NGVD DATUM AS SHOWN ON THIS SURVEY, SUBTRACT 0.906 FEET FROM THE ELEVATIONS SHOWN.
3. HORIZONTAL FEATURES SHOWN ON THE MAP REFER TO A NATIONAL GEODETIC SURVEY POINT WITH DESIGNATION "G15 0131 KAREN MCKEE", PID NUMBER AK7129 AND IS RELATIVE TO NORTH AMERICAN DATUM OF 1983 (NAD83). 2011 ADJUSTMENT, STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE. DISTANCES SHOWN ARE GRID DISTANCES.

GENERAL NOTES:

1. DISCHARGE OF GROUNDWATER FROM DEWATERING OPERATIONS REQUIRES APPROVAL FROM FDEP AND THE APPLICABLE WATER MANAGEMENT DISTRICT. THE DEVELOPER/CONTRACTOR SHALL OBTAIN AND FDEP GENERIC PERMIT FOR THE DISCHARGE OF GROUND WATER FROM DEWATERING OPERATIONS PURSUANT TO THE REQUIREMENTS OF 62-621.300(2)(A) AND 62-620 F.A.C. AND FLORIDA STATUTES CHAPTER 403. REFER TO THE DEWATERING REQUIREMENTS IN 62-621.300(4)(A) CONSTRUCTION GENERIC PERMIT OR 62-621.300(2)(A) DEWATERING GENERIC PERMIT AS APPLICABLE. APPROPRIATE BMPs MUST BE IMPLEMENTED TO ENSURE THAT DISCHARGES DO NOT EXCEED SURFACE WATER QUALITY STANDARDS PER THE CGP. IF DEWATERING OFF SITE OR INTO THE COUNTY MSA, TURBIDITY MUST BE MONITORED TO ENSURE THAT DISCHARGES DO NOT EXCEED 29 NTU OVER BACKGROUND PER 62-302.330 FAC.
2. PRIOR TO THE START OF LAND DISTURBING ACTIVITIES, WHICH INCLUDES DEMOLITION, EARTHWORK AND/OR CONSTRUCTION, THE DEVELOPER/CONTRACTOR SHALL PREPARE A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND SUBMIT TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) A NOTICE OF INTENT (NOI) TO OBTAIN COVERAGE UNDER THE NPDES GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES (CGP) PURSUANT TO THE REQUIREMENTS OF 62-621.300(4)(A) F.A.C. A COPY OF THE NOI SHALL BE SUBMITTED TO THE OPERATOR(S) OF THE MSA. COPIES OF THE SWPPP, NOI, AND FDEP ACKNOWLEDGEMENT LETTER ARE TO BE KEPT ON THE PROJECT SITE AND MADE AVAILABLE UPON REQUEST. UPON COMPLETION OF ALL LAND DISTURBING ACTIVITIES AND AFTER FINAL STABILIZATION OF THE SITE IS COMPLETE, THE DEVELOPER/CONTRACTOR SHALL SUBMIT TO FDEP A NOTICE OF TERMINATION (NOT) TO END THEIR COVERAGE UNDER THE CGP AND PROVIDE A COPY OF THE NOT TO THE OPERATOR(S) OF THE MSA. AN INSPECTOR, CERTIFIED BY ORANGE COUNTY, IS REQUIRED TO INSPECT THE EROSION AND SEDIMENTATION CONTROL MEASURES SHOWN ON APPROVED STORMWATER POLLUTION PREVENTION PLAN. INSPECTION REPORTS ARE TO BE COMPLETED ON FORMS MEETING THE MINIMUM REQUIREMENTS OF CGP AND SUBMITTED ONCE EVERY WEEK AND AFTER EVERY RAINFALL OF 0.50" OR MORE DURING THE CONSTRUCTION PHASE.

LEGEND

| EXIST. | LEGEND |
|-------------------------|--------|
| ASPHALT PAVEMENT | — |
| CONCRETE PAVEMENT | — |
| CONCRETE CURB | — |
| SIGN | ⊠ |
| CHAIN LINK FENCE | —X—X— |
| WATER LINE | —W— |
| SANITARY SEWER LINE | —SS— |
| STORM DRAIN LINE | —SD— |
| LIGHT POLE | ⊙ |
| WATER SPIGOT | ⊙ |
| SANITARY SEWER CLEANOUT | ⊙ |
| STORM DRAIN INLET | ⊙ |
| POWER POLE | ⊙ |
| TREE | ⊙ |

OVERALL EXISTING SITE PLAN

UTILITY EXTENSION

MAGNOLIA PARK ECO-TOURISM

OC CAPITAL PROJECTS
 ORANGE COUNTY, FL



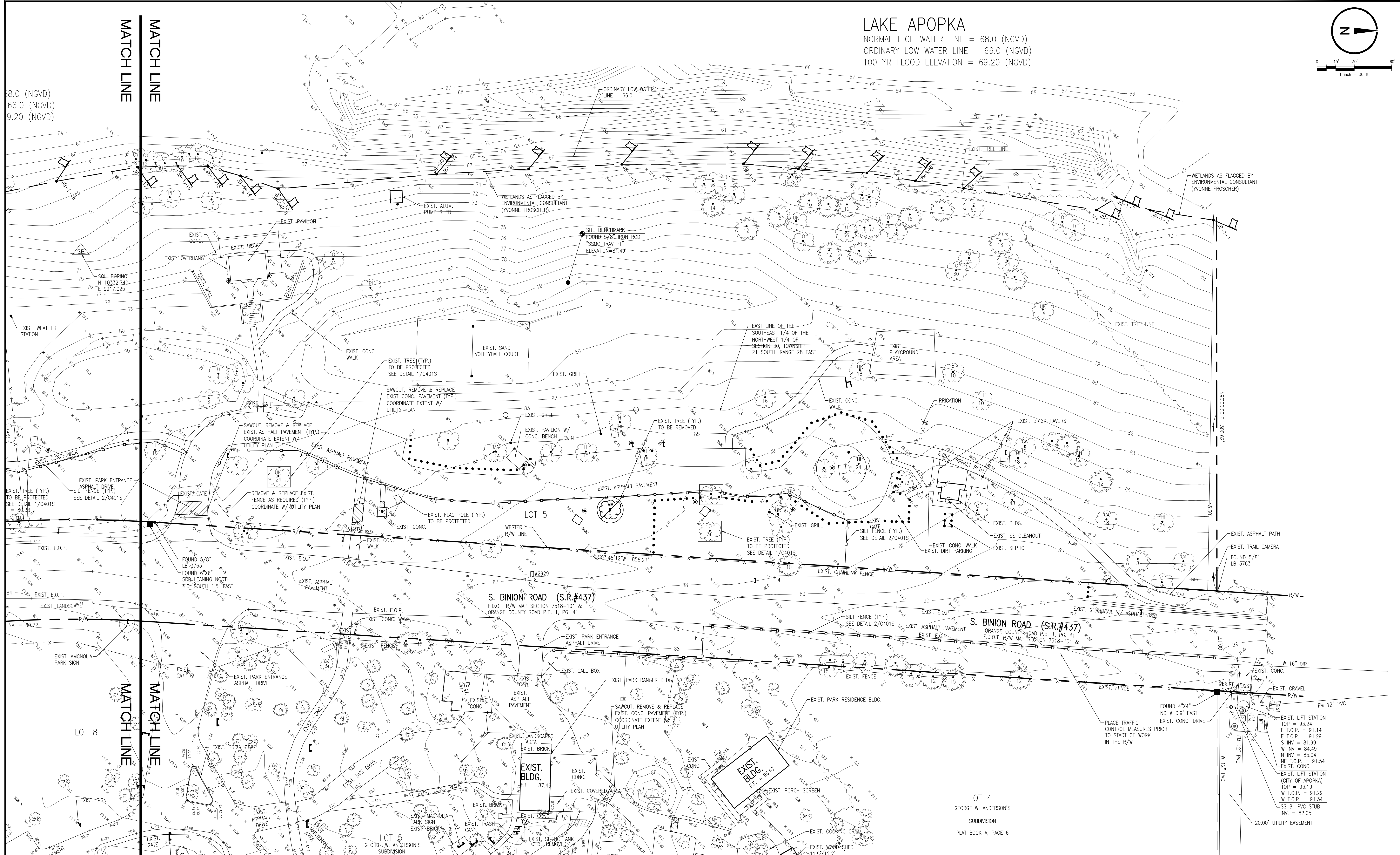
Seal: Majid Kalaghchi P.E. 41046

ENGINEERING
 PLANNING
 URBAN DESIGN

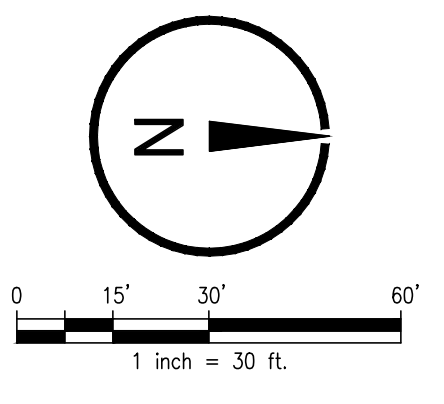
SKConsortium, Inc.
 10537 N. ORLANDO AVE., SUITE 3 • MAITLAND • FLORIDA 32751
 TELEPHONE: 407-629-4288 • FACSIMILE: 407-629-6556 • E-MAIL: EEF# 7080

30% DESIGN DEVELOPMENT 2-28-18
 60% CONSTRUCTION DOCS 10-22-18
 100% PERMIT SET 10-31-18

Issue Date and Purpose
 Project Number: **1733**
 Drawn by: D. FORSITH
 Checked by: M. KALAGHCHI
C001S
 File No:



LAKE APOPKA
 NORMAL HIGH WATER LINE = 68.0 (NGVD)
 ORDINARY LOW WATER LINE = 66.0 (NGVD)
 100 YR FLOOD ELEVATION = 69.20 (NGVD)



8.0 (NGVD)
 66.0 (NGVD)
 9.20 (NGVD)

DEMOLITION AND EROSION CONTROL PLAN
 SCALE: 1" = 30'

- SOIL EROSION & SEDIMENTATION CONTROL NOTES:**
1. ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO STANDARDS OF ORANGE COUNTY, CITY OF APOPKA, FLORIDA, FDEP AND ST. JOHNS RIVER WATER MANAGEMENT DISTRICT. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO, OR AS THE FIRST STEP IN, CONSTRUCTION. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTATION OF SILT OFF THE SITE.
 2. SOIL MATERIALS, DURING CONSTRUCTION SHALL BE CONTAINED, AND NOT BE ALLOWED TO COLLECT ON ANY OFF-PERIMETER AREAS OR IN WATERWAYS.
 3. ALL MUD, DIRT OR OTHER MATERIALS TRACKED OR SPILLED ONTO EXISTING STATE-COUNTY-CITY OR PRIVATE ROADS AND FACILITIES FROM THIS SITE, DUE TO CONSTRUCTION SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR/BUILDER.
 4. PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES OR ANY DISTURBED LAND AREAS SHALL BE COMPLETED WITHIN (7) SEVEN CALENDAR DAYS AFTER FINAL GRADING OR INACTIVITY AT THE SITE. WHEN IT IS NOT POSSIBLE TO PERMANENTLY PROTECT A DISTURBED AREA IMMEDIATELY AFTER GRADING OPERATIONS, TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED. ALL TEMPORARY PROTECTION SHALL BE MAINTAINED UNTIL PERMANENT MEASURES ARE IN PLACE AND ESTABLISHED.
 5. DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR TO DETERMINE THE EFFECTIVENESS OF THESE EFFORTS. ANY NECESSARY REMEDIES INCLUDING SILT REMOVAL AND CORRECTIVE ACTIONS IN EROSION PROTECTION SHALL BE PERFORMED IMMEDIATELY.

- DEMOLITION NOTES:**
1. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
 2. CONTRACTOR SHALL PROTECT THE EDGE OF ALL REMAINING PAVEMENT AND HARDSCAPE. DO NOT HAUL OVER UNPROTECTED PAVEMENT OR SAWCUT EDGES.
 3. ALL DEMOLITION AND CONSTRUCTION ACTIVITY WILL BE ACCOMPLISHED IN APPROPRIATE PHASES IN ORDER TO KEEP EXISTING FACILITY OPERATIONAL.
 4. ALL DEMOLITION AND CONSTRUCTION EFFORT SHALL BE COORDINATED WITH OWNER'S REPRESENTATIVE ON SITE. CONTRACTOR SHALL PROVIDE PRIOR NOTICE (72 HOURS MIN.) TO OWNER BEFORE ANY INTERRUPTION IN UTILITY SERVICE TO EXISTING BUILDING.
 5. INGRESS AND EGRESS TO SITE DURING CONSTRUCTION IS ALLOWED ONLY THROUGH APPROVED SITE DRIVEWAYS.
 6. EXISTING SITE MAY CONTAIN ABOVE AND BELOW GROUND IMPROVEMENTS NOT DEPICTED ON THIS PLAN. CONTRACTOR SHALL VERIFY SITE CONDITIONS WITH OWNER'S REPRESENTATIVE AND BE RESPONSIBLE FOR REMOVAL OR RELOCATION OF EXISTING IMPROVEMENTS INTERFERING WITH NEW DEVELOPMENT.
 7. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CONSTRUCTION EFFORT WITH OWNERS REPRESENTATIVE AND BE RESPONSIBLE FOR MAINTENANCE OF TRAFFIC DURING CONSTRUCTION.
 8. INFORMATION CONCERNING EXISTING ABOVE AND BELOW GROUND IMPROVEMENTS DEPICTED ON THIS PLAN HAVE BEEN PROVIDED BY TOPOGRAPHIC SURVEY PREPARED BY SOUTHEASTERN SURVEYING.
 9. CONTRACTOR SHALL VERIFY CONDITIONS ON PROJECT SITE PRIOR TO THE START OF CONSTRUCTION.
 10. CONTRACTOR SHALL REMOVE ALL COMPONENTS OF SEPTIC TANKS AND DRAIN FIELDS AND BACKFILL AND SOD THE AREA.
 11. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL EXISTING VEGETATION AND TREES THAT MAY INTERFERE WITH PLACEMENT OF GRAVITY SEWER SYSTEM. ALL DISTURBED AREAS DUE TO TREE REMOVAL SHALL BE BACKFILLED TO EXISTING GRADES AND SODDED.

- PHASING NOTES:**
1. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF TRAFFIC ON-SITE AND OFF-SITE DURING CONSTRUCTION. CONTRACTOR SHALL MAINTAIN VEHICULAR AND PEDESTRIAN ACCESS BY USE OF BARRIQUES, TEMPORARY WALKS, FENCING, SIGNAGE, ETC.
 2. CONTRACTOR SHALL COORDINATE CONSTRUCTION PHASING WITH OWNER'S REPRESENTATIVE. CONTRACTOR SHALL PREPARE A PHASING PLAN AND FOR PLACEMENT OF UTILITIES FOR OWNER'S REVIEW AND BE RESPONSIBLE FOR ALTERING THE PROJECT PHASING AS REQUIRED TO ACCOMMODATE THE OWNER'S OPERATION OF EXISTING FACILITY.
 3. CONTRACTOR SHALL MAINTAIN UTILITY SERVICE TO EXISTING BUILDINGS DURING ENTIRE CONSTRUCTION PERIOD. CONTRACTOR SHALL PROVIDE ALL TEMPORARY MEASURES AS REQUIRED.
 4. CONTRACTOR MUST CONSTRUCT NEW LIFT STATIONS AND FORCE MAINS, OBTAIN FINAL APPROVAL AND CLEARANCE FROM CITY OF APOPKA AND FDEP PRIOR TO REMOVAL OF EXIST. SEPTIC TANK & DRAIN FIELD.

- EXISTING DRAIN FIELD DEMOLITION NOTES:**
- REMOVE EXISTING OSTDS (SEPTIC SYSTEM) VIA PERMIT FROM OCHD-EVH, 1001 EXECUTIVE CENTER DR., ORLANDO, FL 32803, (407)-858-1430. ALL SEPTIC TANKS MUST BE PUMPED BY LICENSED SEPTIC CONTRACTOR. THE BOTTOM OF THE TANK MUST BE RIPPURED AND THE TANK MUST BE FILLED WITH CLEAN SAND OR THE TANK MUST BE REMOVED. THE ABANDONMENT PERMITS MUST BE APPLIED FOR AND ISSUED PRIOR TO THE APPROVAL OF THIS BUILDING PERMIT. THE SCOPE OF SERVICES REQUIRES REMOVAL OF EXISTING DRAINFIELDS IN THEIR ENTIRETY, BACKFILL OF THE AREA TO ADJACENT FINISH GRADES AND SODDING ALL DISTURBED AREAS.

- GENERAL NOTES:**
- CONTRACTOR MAY UTILIZE DIRECTIONAL BORE IN LIEU OF OPEN CUT FOR PLACEMENT OF FORCE MAIN ON SITE. SEE UTILITY PLANS

LEGEND

| | EXIST. | TO BE REMOVED |
|-------------------------|--------|---------------|
| ASPHALT PAVEMENT | | |
| CONCRETE PAVEMENT | | |
| CONCRETE CURB | | |
| SIGN | | |
| CHAIN LINK FENCE | | |
| WATER LINE | | |
| SANITARY SEWER LINE | | |
| STORM DRAIN LINE | | |
| LIGHT POLE | | |
| WATER SPIGOT | | |
| SANITARY SEWER CLEANOUT | | |
| STORM DRAIN INLET | | |
| POWER POLE | | |
| TREE | | |

ENGINEERING
 PLANNING
 URBAN DESIGN

SK Consortium, Inc.
 1053 N. ORLANDO AVE., SUITE 3 • MAITLAND • FLORIDA 32751
 TELEPHONE: 407-629-4288 • FACSIMILE: 407-629-7080

Seal: Majid Kaloghchi P.E. 41046

ORANGE COUNTY GOVERNMENT
 FLORIDA

DEMOLITION AND EROSION CONTROL PLAN

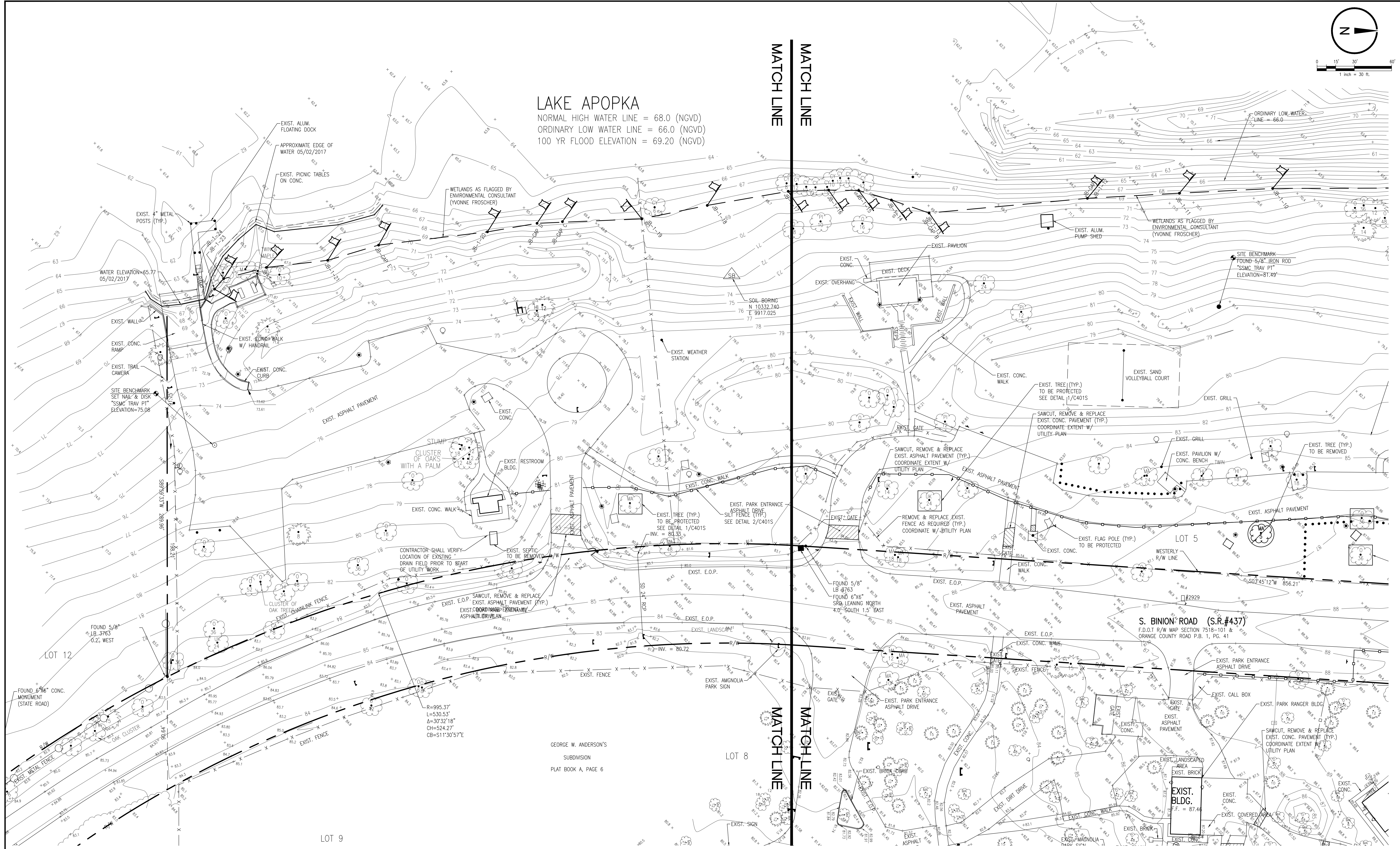
UTILITY EXTENSION
MAGNOLIA PARK ECO-TOURISM
 OC CAPITAL PROJECTS
 ORANGE COUNTY, FL

30% DESIGN DEVELOPMENT 2-28-18
 60% CONSTRUCTION DOCS 10-22-18
 100% PERMIT SET 10-31-18

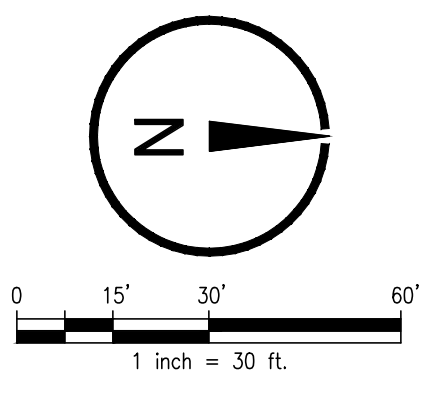
Issue Date and Purpose
 Project Number: **1733**

Drawn by: D. FOSTER
 Checked: M. KALOGHCHI

C002S
 File No:



LAKE APOPKA
 NORMAL HIGH WATER LINE = 68.0 (NGVD)
 ORDINARY LOW WATER LINE = 66.0 (NGVD)
 100 YR FLOOD ELEVATION = 69.20 (NGVD)



DEMOLITION AND EROSION CONTROL PLAN
 SCALE: 1" = 30'

MOT NOTES:

1. MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION AND REVISIONS) AND THE FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN STANDARDS (LATEST EDITION AND REVISIONS).
2. CONTRACTOR SHALL PREPARE AND SUBMIT A TRAFFIC CONTROL PLAN TO OC PUBLIC WORKS AS PART OF R/W UTILIZATION PERMIT.
3. LOCAL RESIDENTIAL/BUSINESS ACCESS SHALL BE MAINTAINED AT ALL TIMES. CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE RESIDENTS/BUSINESSES AFFECTED BY CONSTRUCTION ACTIVITIES, ONE (1) WEEK IN ADVANCE OF THE START OF ANY PHASE OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE COPIES OF THE NOTIFICATION TO THE TRAFFIC CONTROL MANAGER PRIOR TO DISTRIBUTION.
4. DURING NON-WORKING HOURS, NO EQUIPMENT, VEHICLES OR MATERIAL SHALL BE PARKED OR STORED WITHIN THE CLEAR ZONE OF A ROADWAY OPEN TO VEHICULAR TRAFFIC.
5. EXISTING REGULATORY AND WARNING SIGNS ARE TO BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE NOTED.
6. PEDESTRIAN CONTROL SHALL BE MAINTAINED ON ONE SIDE OF THE ROAD AT ALL TIMES. IF UNABLE TO DO SO, THE CONTRACTOR SHALL PROVIDE TEMPORARY WALKWAYS, BOARDWALKS AND/OR TEMPORARY CONCRETE SIDEWALKS.

LEGEND

| | EXIST. | TO BE REMOVED |
|-------------------------|--------|---------------|
| ASPHALT PAVEMENT | | |
| CONCRETE PAVEMENT | | |
| CONCRETE CURB | | |
| SIGN | | |
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| STORM DRAIN INLET | | |
| POWER POLE | | |
| TREE | | |

DEMOLITION AND EROSION CONTROL PLAN

UTILITY EXTENSION

MAGNOLIA PARK ECO-TOURISM

OC CAPITAL PROJECTS

ORANGE COUNTY, FL



Seal: Majid Kaloghchi P.E. 41046

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SK Consortium, Inc.

1053 N. ORLANDO AVE., SUITE 3 • MAITLAND • FLORIDA 32751
 TELEPHONE: 407-629-4288 • FACSIMILE: 407-629-1656 • E-MAIL: EEF# 7080

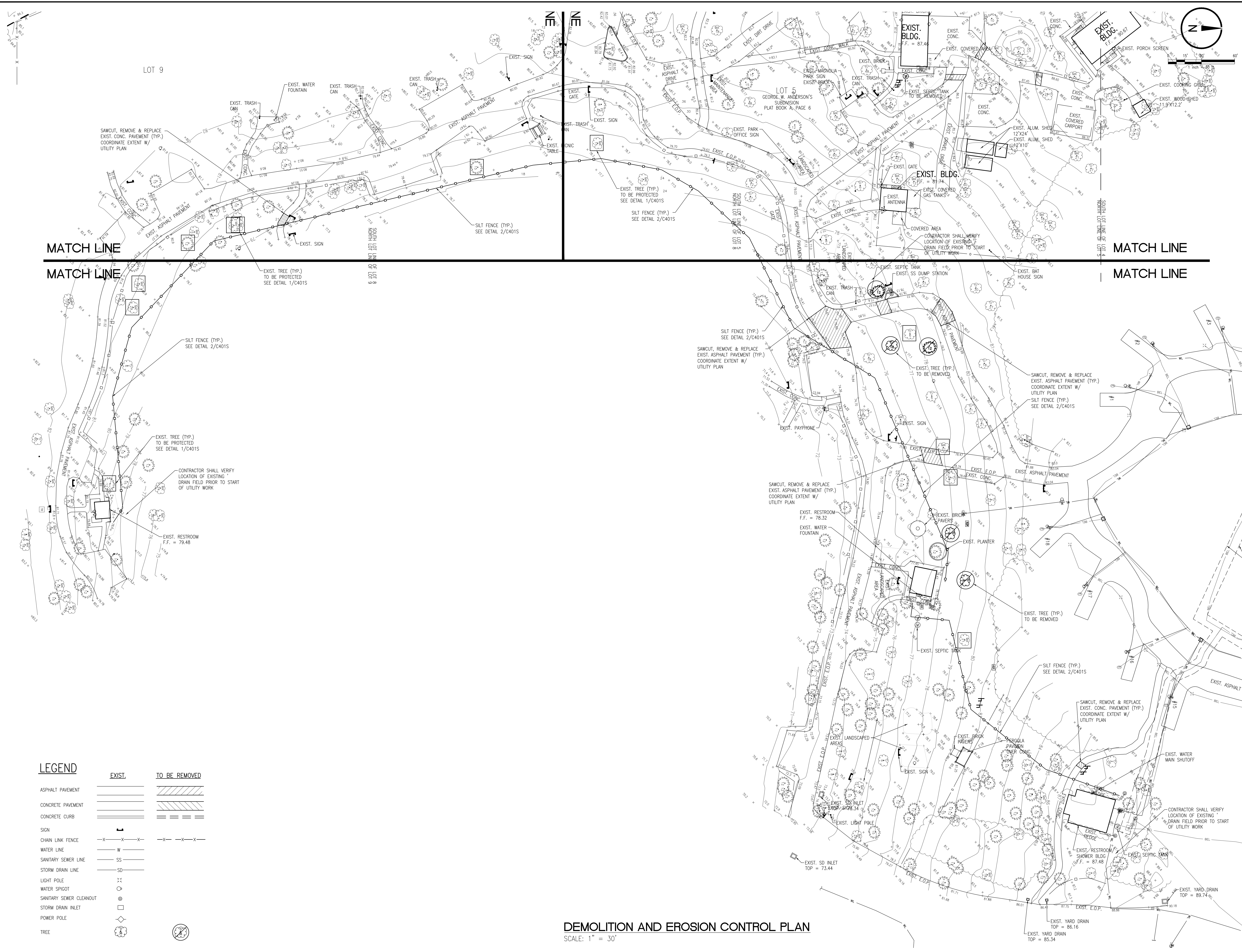
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Issue Date and Purpose
 Project Number: **1733**

Drawn by: D. FORSYTH
 Checked: M. KALOGHCHI

C003S

File No:



LEGEND

| | EXIST. | TO BE REMOVED |
|-------------------------|--------|---------------|
| ASPHALT PAVEMENT | | |
| CONCRETE PAVEMENT | | |
| CONCRETE CURB | | |
| SIGN | | |
| CHAIN LINK FENCE | | |
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| POWER POLE | | |
| TREE | | |

DEMOLITION AND EROSION CONTROL PLAN
SCALE: 1" = 30'

ENGINEERING
PLANNING
DESIGN
URBAN DESIGN

SKConsortium, Inc.
1053 N. ORLANDO AVE., SUITE 3 • MAITLAND • FLORIDA, 32751
TELEPHONE: 407-629-4288 • FACSIMILE: 407-658-7080

Seal: Majid Kalaghchi P.E. 41046

ORANGE COUNTY GOVERNMENT
FLORIDA

DEMOLITION AND EROSION CONTROL PLAN

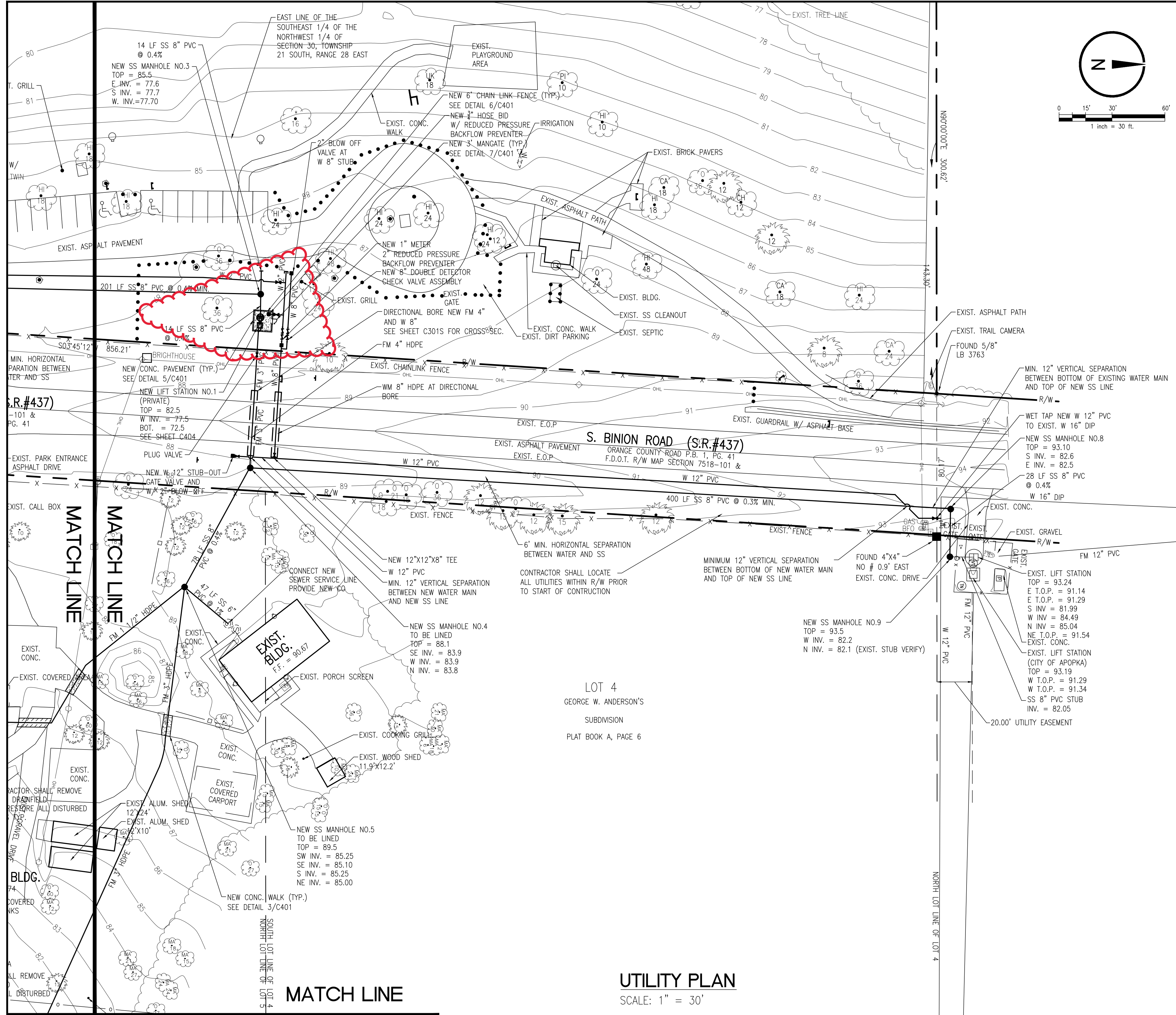
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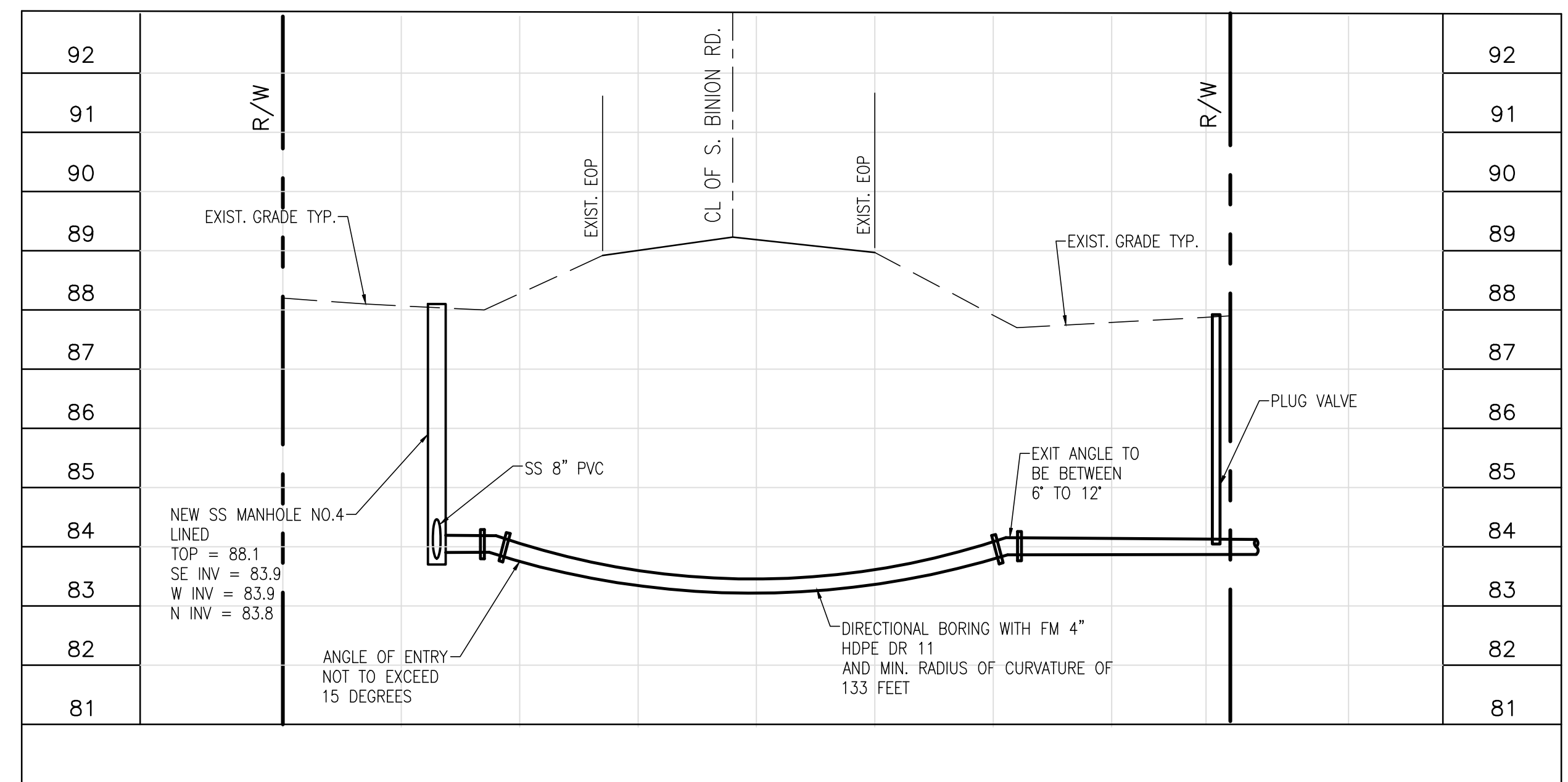
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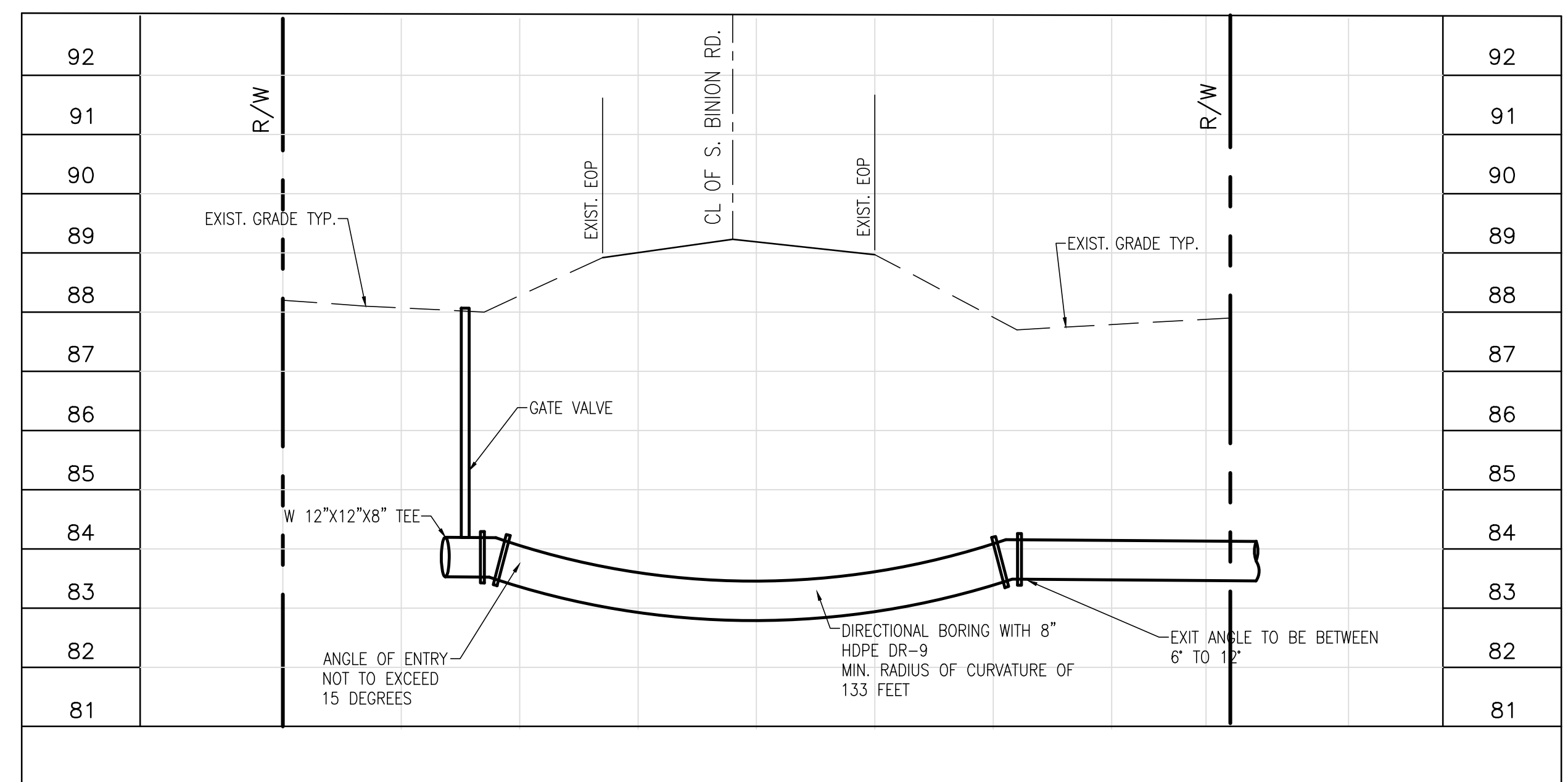
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| Issue Date and Purpose | 1733 |
| Project Number: | |
| Drawn by: | D. FOSTRITH |
| Checked by: | M. KALAGHCHI |
| File No.: | C004S |



UTILITY PLAN
SCALE: 1" = 30'



FORCE MAIN CROSS SECTION AT S BINION RD.
HORIZ. : 1" = 10'
VERT. : 1" = 2'



WATER MAIN CROSS SECTION AT S BINION RD.
HORIZ. : 1" = 10'
VERT. : 1" = 2'

TRAFFIC CONTROL PLAN NOTES:

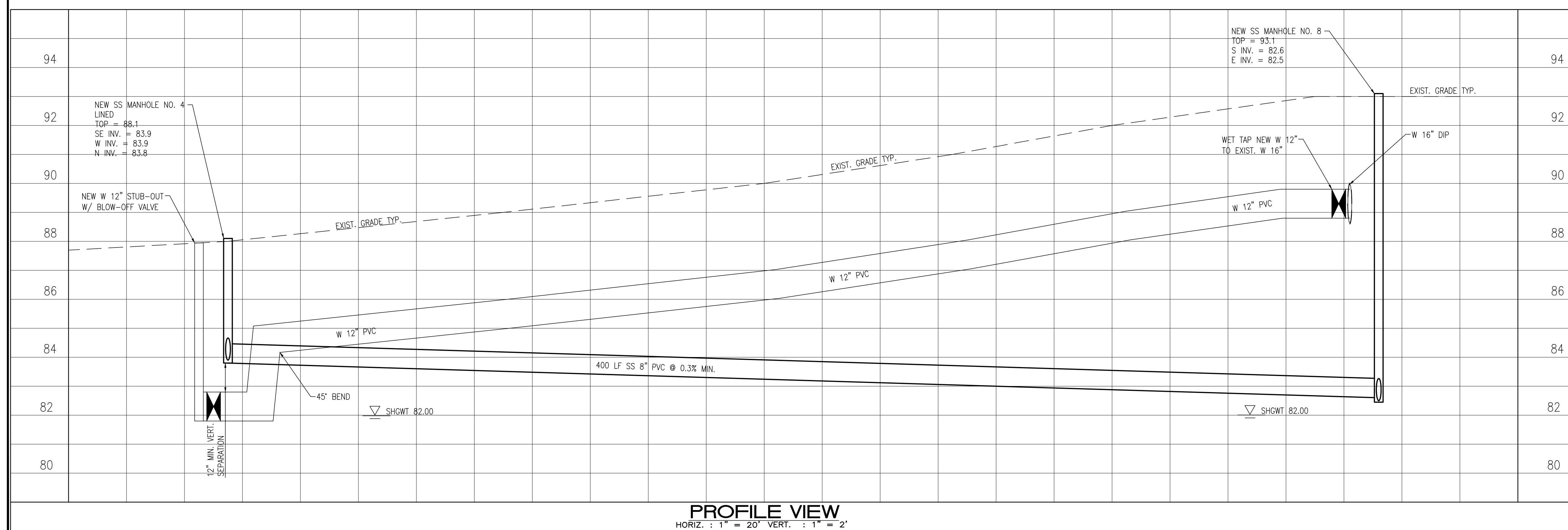
1. TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE FDOT 2017-2018 ROADWAY AND TRAFFIC DESIGN STANDARDS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING A WORK SCHEDULE SO THAT ANY LOCATION UNDER CONSTRUCTION WILL NOT BE LEFT IN A HAZARDOUS CONDITION.
3. A 24 HOUR EMERGENCY PHONE NUMBER SHALL BE PROVIDED BY THE CONTRACTOR FOR AFTER HOUR CALLS RELATED TO MAINTENANCE OF CONSTRUCTION ZONE DEVICES.
4. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO THE ROADWAY AT ALL TIMES DURING CONSTRUCTION.
5. INSTALL ADVANCE WARNING SIGNAGE AND BARRICADES ALONG SOUTH BINION RD. PER FDOT 2017-2018 ROADWAY AND TRAFFIC DESIGN STANDARDS.

GENERAL NOTES:

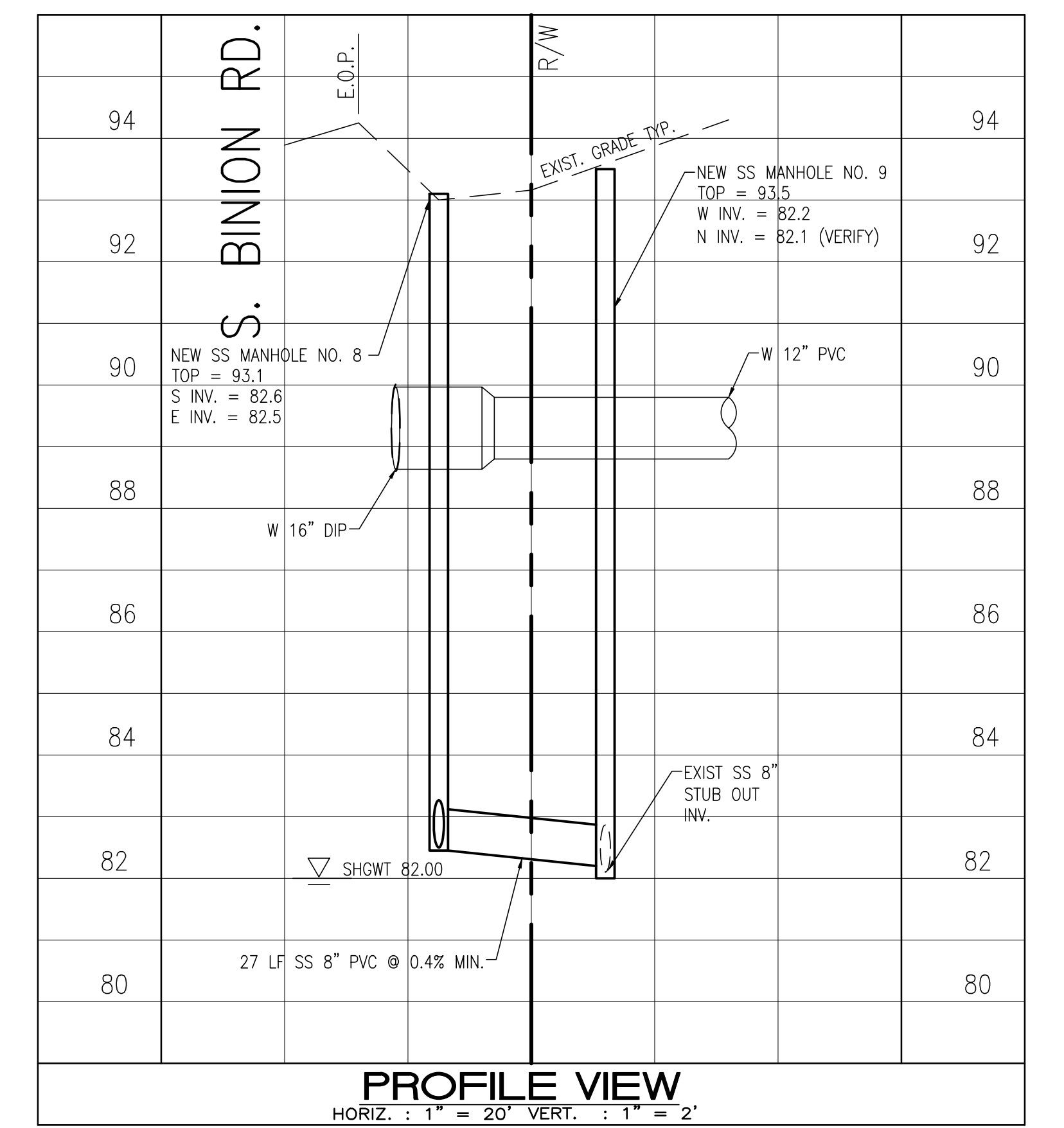
1. CONTRACTOR MUST APPLY FOR AND OBTAIN A R/W UTILIZATION PERMIT FROM OC PUBLIC WORKS DEPT. PRIOR TO START OF WORK WITHIN R/W.
2. SEE SHEET C300 FOR CITY OF APOPKA GENERAL NOTES ALL DISTURBED AREAS SHALL BE SOBBED.
3. ALL PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTED UNLESS SPECIFICALLY EXEMPTED BY THE PLANS. THE COST FOR SUCH RESTORATION SHALL BE INCIDENTAL TO OTHER CONSTRUCTION AND NO EXTRA COMPENSATION WILL BE ALLOWED.
4. CONTRACTOR MUST OBTAIN A COPY OF TOPOGRAPHIC SURVEY PERFORMED BY PROJECT SURVEYOR AND REVIEW LOCATION OF ALL EXISTING UTILITIES AND TEST HOLES.
5. CONTRACTOR MUST VERIFY VERTICAL AND HORIZ. LOCATION OF ALL EXISTING UTILITIES BY CONTACTING UTILITY COMPANIES AND SUNSHINE AND BE RESPONSIBLE FOR ALTERATION OF DIRECTIONAL BORE PROFILE WITH RESPECT TO EXISTING UTILITIES LOCATED.

LEGEND

| EXIST. | NEW |
|--------|-----|
| W | W |
| SS | SS |
| FM | FM |
| PP | PP |
| LP | LP |
| WV | WV |
| CO | CO |
| SM | SM |
| FR | FR |
| OH | OH |



PROFILE VIEW
HORIZ. : 1" = 20' VERT. : 1" = 2'



PROFILE VIEW
HORIZ. : 1" = 20' VERT. : 1" = 2'

URBAN DESIGN PLANNING ENGINEERING
SKConsortium, Inc.
1053 N. ORLANDO AVE., SUITE 3 • MAITLAND • FLORIDA, 32751
TELEPHONE: 407-629-4288 • FACSIMILE: 407-656-7080

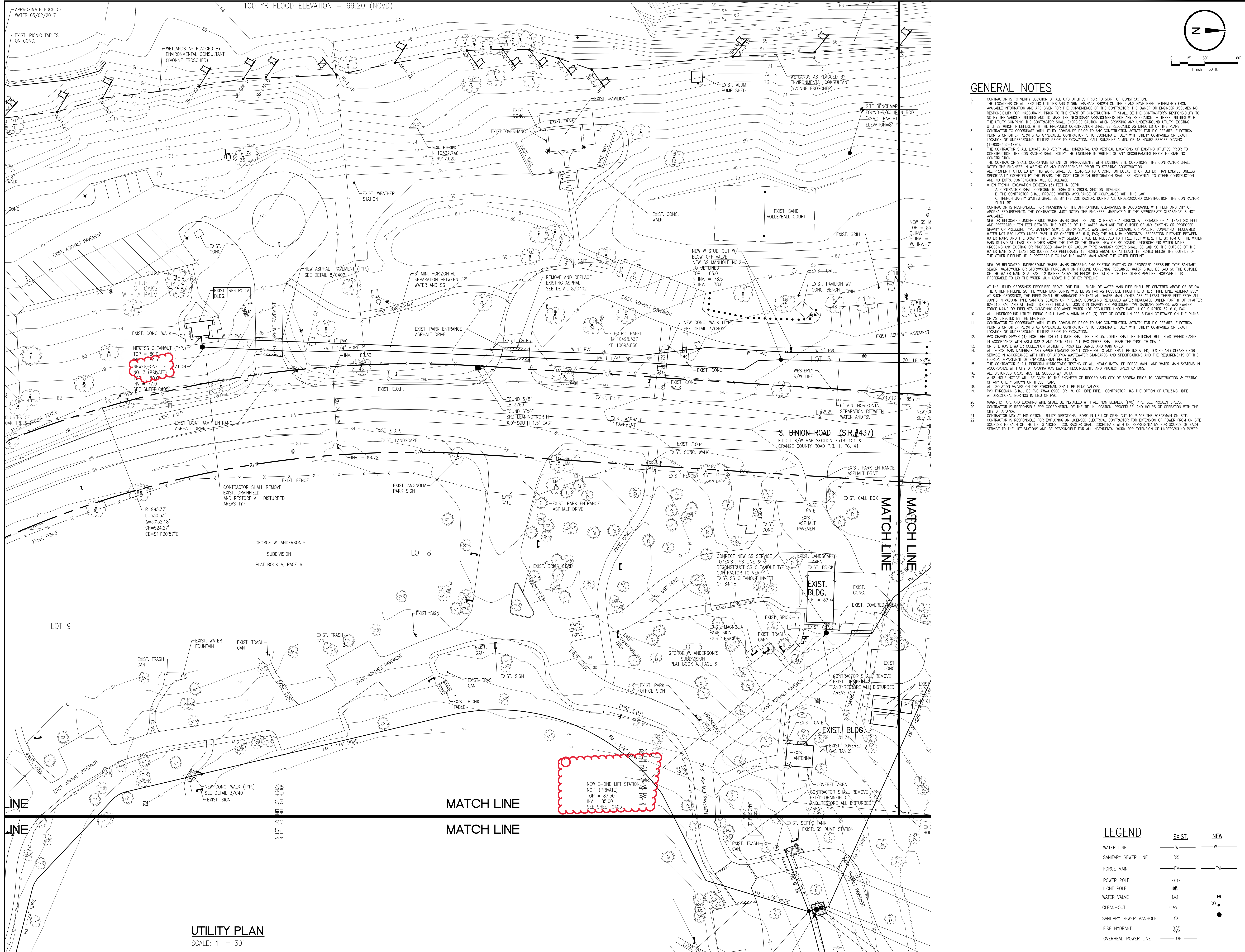
Seal: Majid Kaloghchi P.E., 41046
ORANGE COUNTY GOVERNMENT
FLORIDA

UTILITY PLAN
UTILITY EXTENSION
MAGNOLIA PARK ECO-TOURISM
OC CAPITAL PROJECTS
ORANGE COUNTY, FL

30% DESIGN DEVELOPMENT 2-28-18
60% CONSTRUCTION DOCS 10-22-18
100% PERMIT SET 10-31-18

Issue Date and Purpose
Project Number: **1733**

Drawn by: D. FORSYTH
Checked by: M. KALOGHCHI
File No: **C301S**



GENERAL NOTES

- CONTRACTOR IS TO VERIFY LOCATION OF ALL U/G UTILITIES PRIOR TO START OF CONSTRUCTION.
- THE LOCATIONS OF ALL EXISTING UTILITIES AND STORM DRAINAGE SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM AVAILABLE INFORMATION AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE OWNER OR ENGINEER ASSUMES NO RESPONSIBILITY FOR INACCURACY PRIOR TO THE START OF CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE VARIOUS UTILITIES AND TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATION OF THESE UTILITIES WITH THE UTILITY COMPANY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING ANY UNDERGROUND UTILITY. EXISTING UTILITIES WHICH INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE RELOCATED AS DIRECTED ON THE PLANS.
- CONTRACTOR TO COORDINATE WITH UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION ACTIVITY FOR DIG PERMITS, ELECTRICAL PERMITS OR OTHER PERMITS AS APPLICABLE. CONTRACTOR IS TO COORDINATE FULLY WITH UTILITY COMPANIES ON EXACT LOCATION OF UNDERGROUND UTILITIES PRIOR TO EXCAVATION. CALL SUNSHINE A MIN. OF 48 HOURS BEFORE DIGGING (1-800-432-4700).
- THE CONTRACTOR SHALL LOCATE AND VERIFY ALL HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE EXTENT OF IMPROVEMENTS WITH EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION.
- ALL PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTED UNLESS SPECIALLY DESIGNATED BY THE PLANS. THE COST FOR SUCH RESTORATION SHALL BE INCIDENTAL TO OTHER CONSTRUCTION AND NO EXTRA COMPENSATION WILL BE ALLOWED.
- WHEN TRENCH EXCAVATION EXCEEDS (5) FEET IN DEPTH:
 - A CONTRACTOR SHALL CONFORM TO OSHA STD. 29CFR. SECTION 1926.650.
 - THE CONTRACTOR SHALL PROVIDE WRITTEN ASSURANCE OF COMPLIANCE WITH THIS LAW.
 - TRENCH SAFETY SYSTEM SHALL BE BY THE CONTRACTOR. DURING ALL UNDERGROUND CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING OF THE APPROPRIATE CLEARANCES IN ACCORDANCE WITH FDOP AND CITY OF APOPKA REQUIREMENTS. THE CONTRACTOR MUST NOTIFY THE ENGINEER IMMEDIATELY IF THE APPROPRIATE CLEARANCE IS NOT AVAILABLE.
- NEW OR RELOCATED UNDERGROUND WATER MAINS SHALL BE LAP TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET AND PREFERABLY TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY OR PRESSURE TYPE SANITARY SEWER, STORM SEWER, WASTEWATER FORCEMAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART II OF CHAPTER 62-810, FAC. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND THE GRAVITY TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAD AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER. NEW OR RELOCATED UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY OR VACUUM TYPE SANITARY SEWER SHALL BE LAP SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES AND PREFERABLY 12 INCHES ABOVE OF AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
- NEW OR RELOCATED UNDERGROUND WATER MAINS CROSSING ANY EXISTING EXISTING OR PROPOSED PRESSURE TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCEMAIN OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAP SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
- AT THE UTILITY CROSSINGS DESCRIBED ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPE LINE. ALTERNATIVELY AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM TYPE SANITARY SEWERS OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART II OF CHAPTER 62-810, FAC. AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY OR PRESSURE TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-810, FAC. ALL UNDERGROUND UTILITY PIPING SHALL HAVE A MINIMUM OF (3) FEET OF COVER UNLESS SHOWN OTHERWISE ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- CONTRACTOR TO COORDINATE WITH UTILITY COMPANIES PRIOR TO ANY CONSTRUCTION ACTIVITY FOR DIG PERMITS, ELECTRICAL PERMITS OR OTHER PERMITS AS APPLICABLE. CONTRACTOR IS TO COORDINATE FULLY WITH UTILITY COMPANIES ON EXACT LOCATION OF UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
- PVC GRAVITY SEWER (4) INCH THROUGH (15) INCH SHALL BE SDR 35. JOINTS SHALL BE INTEGRAL BELL ELASTOMERIC GASKET IN ACCORDANCE WITH ASTM D3212 AND ASTM F427. ALL PVC SEWER SHALL BEAR THE "MSF-DW" SOUL." ON SITE WASTE WATER COLLECTION SYSTEM IS PRIVATELY OWNED AND MAINTAINED.
- ALL FORCE MAIN MATERIALS AND APPURTENANCES SHALL CONFORM TO AND SHALL BE INSTALLED, TESTED AND CLEARED FOR SERVICE IN ACCORDANCE WITH CITY OF APOPKA WASTEWATER STANDARDS AND SPECIFICATIONS AND THE REQUIREMENTS OF THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION.
- THE CONTRACTOR SHALL PERFORM HYDROSTATIC TESTING OF ALL NEWLY-INSTALLED FORCE MAIN AND WATER MAIN SYSTEMS IN ACCORDANCE WITH CITY OF APOPKA WASTEWATER REQUIREMENTS AND PROJECT SPECIFICATIONS.
- ALL DISTURBED AREAS MUST BE SODED W/ BAHAM.
- A 48-HOUR NOTICE WILL BE GIVEN TO THE ENGINEER OF RECORD AND CITY OF APOPKA PRIOR TO CONSTRUCTION & TESTING OF ANY UTILITY SHOWN ON THESE PLANS.
- ALL ELEVATION VALUES ON THE FOREMAN SHALL BE PLUG VALUES.
- PVC FORCEMAIN SHALL BE PVC ANNA C900, OR 18" OR HOPE PIPE. CONTRACTOR HAS THE OPTION OF UTILIZING HOPE AT DIRECTIONAL BORINGS IN LIEU OF PVC.
- MAGNETIC TAPE AND LOCATION WIRE SHALL BE INSTALLED WITH ALL NON METALLIC (PVC) PIPE. SEE PROJECT SPECS.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THE TIE-IN LOCATION, PROCEDURE, AND HOURS OF OPERATION WITH THE CITY OF APOPKA.
- CONTRACTOR MAY AT HIS OPTION, UTILIZE DIRECTIONAL BORE IN LIEU OF OPEN CUT TO PLACE THE FOREMAN ON SITE. CONTRACTOR IS RESPONSIBLE FOR EMPLOYING AN LICENSED ELECTRICAL CONTRACTOR FOR EXTENSION OF POWER FROM ON SITE SOURCES TO EACH OF THE LIFT STATIONS. CONTRACTOR SHALL COORDINATE WITH OC REPRESENTATIVE FOR SOURCE OF EACH SERVICE TO THE LIFT STATIONS AND BE RESPONSIBLE FOR ALL INCIDENTAL WORK FOR EXTENSION OF UNDERGROUND POWER.



Seal: Majid Kalaghchi P.E. 41046

ORANGE COUNTY GOVERNMENT FLORIDA

UTILITY PLAN

UTILITY EXTENSION

MAGNOLIA PARK ECO-TOURISM

OC CAPITAL PROJECTS

ORANGE COUNTY, FL

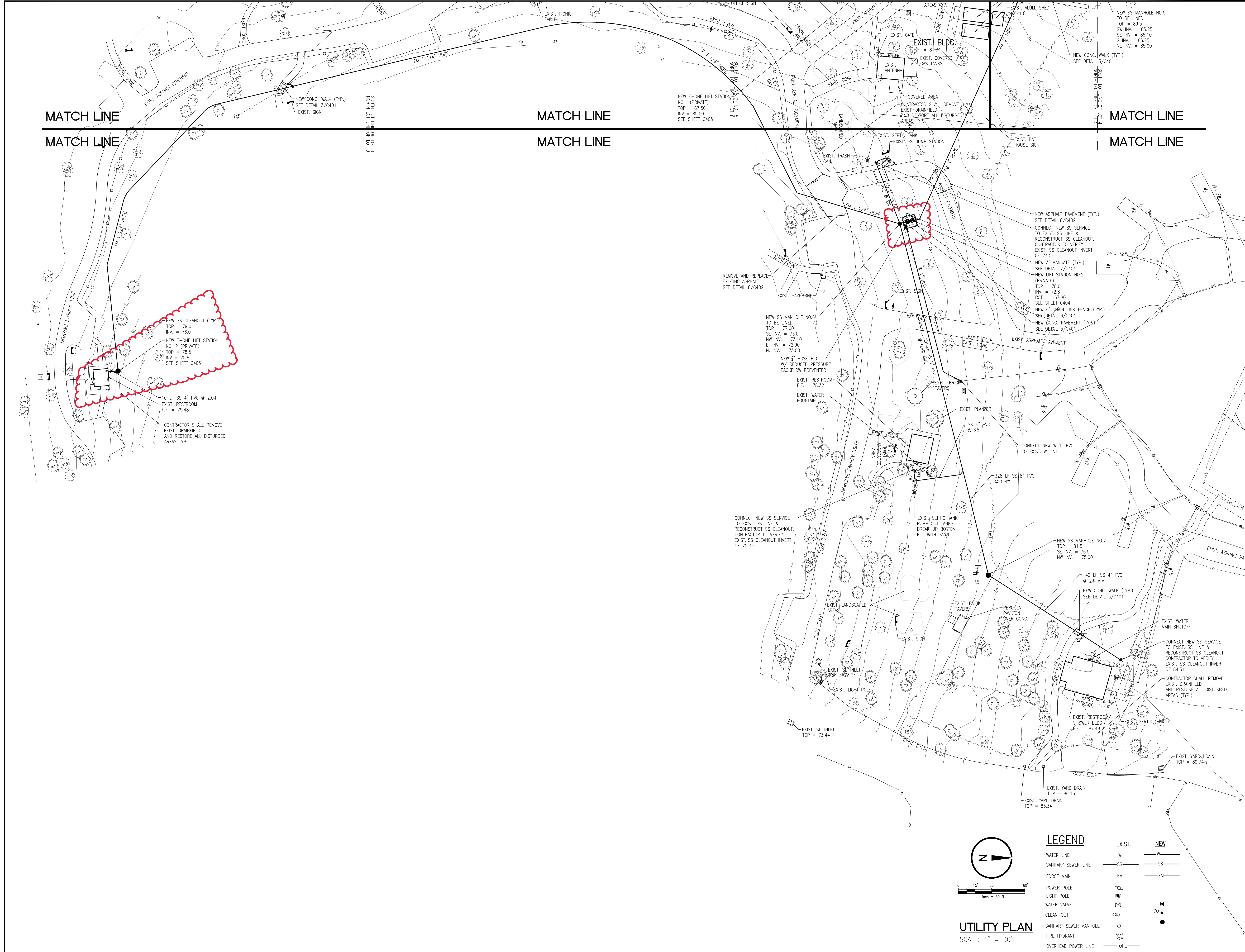
30% DESIGN DEVELOPMENT 2-28-18
 60% CONSTRUCTION DOCS 10-22-18
 100% PERMIT SET 10-31-18

LEGEND

| | EXIST. | NEW |
|------------------------|---------|---------|
| WATER LINE | — W — | — W — |
| SANITARY SEWER LINE | — SS — | — SS — |
| FORCE MAIN | — FM — | — FM — |
| POWER POLE | ⊙ | ⊙ |
| LIGHT POLE | ⊙ | ⊙ |
| WATER VALVE | ⊙ | ⊙ |
| CLEAN-OUT | ⊙ | ⊙ |
| SANITARY SEWER MANHOLE | ⊙ | ⊙ |
| FIRE HYDRANT | ⊙ | ⊙ |
| OVERHEAD POWER LINE | — OHL — | — OHL — |

Issue Date and Purpose
 Project Number: 1733
 Drawn by: D. FORSYTH
 Checked by: M. KALAGHCHI
 File No: C302S

UTILITY PLAN
 SCALE: 1" = 30'



UTILITY PLAN
 UTILITY EXTENSION
MAGNOLIA PARK ECO-TOURISM
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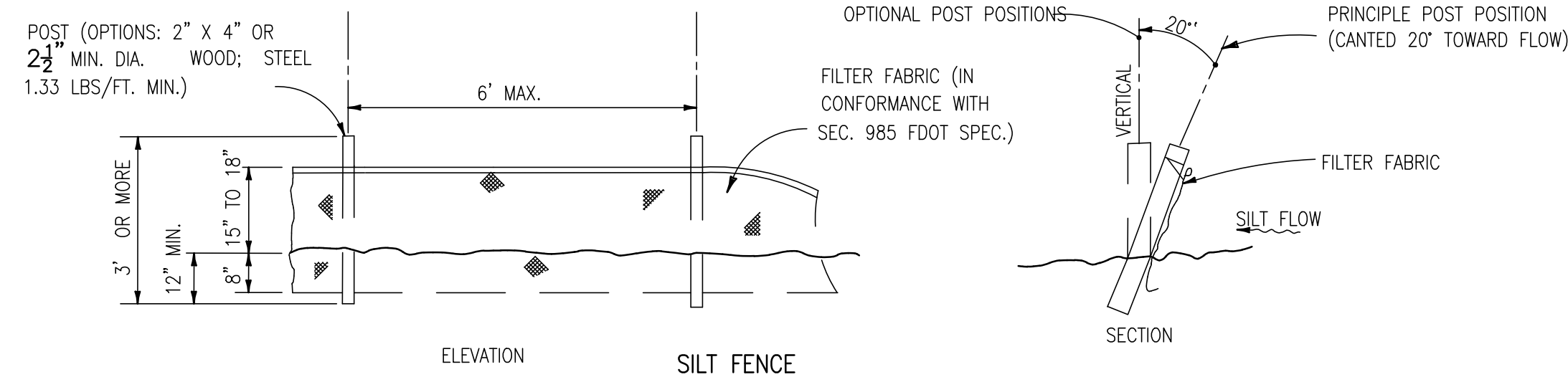
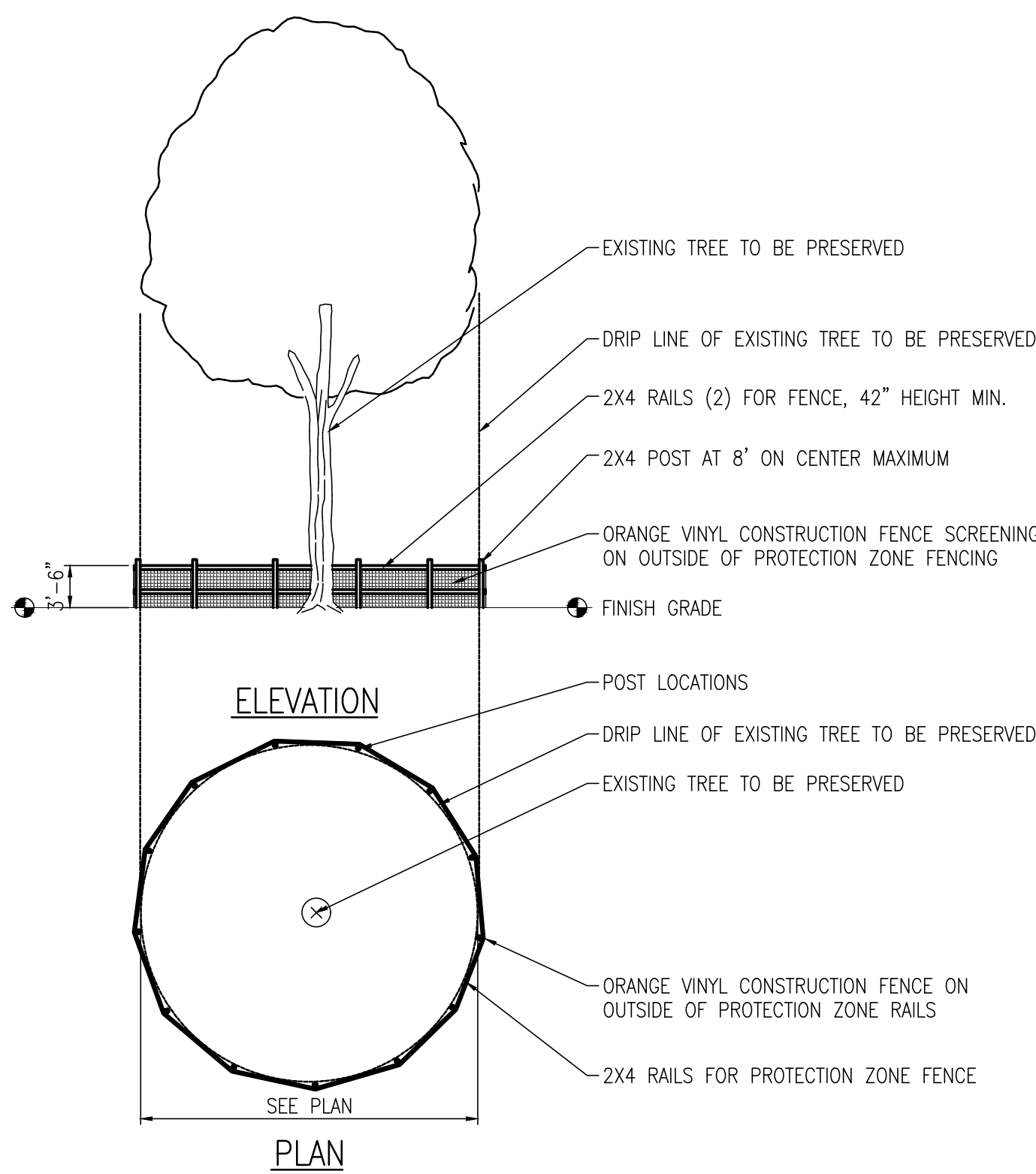
| Issue Date and Purpose | Project Number |
|------------------------|----------------|
| | 1733 |

Drawn by: D. FORSYTH
 Checked: M. KALAGHCHI
C303S
 File No:

LEGEND

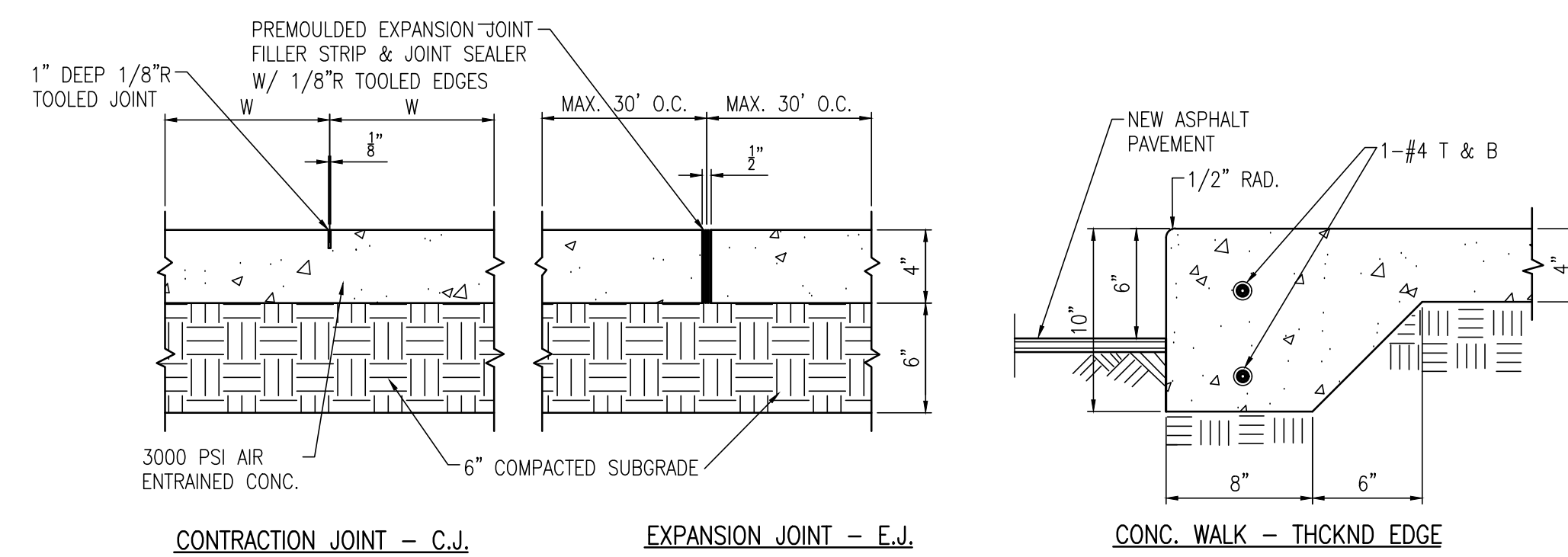
| | EXIST. | NEW |
|------------------------|---------|---------|
| WATER LINE | — W — | — W — |
| SANITARY SEWER LINE | — SS — | — SS — |
| FORCE MAIN | — FM — | — FM — |
| POWER POLE | ⊙ | ⊙ |
| LIGHT POLE | ⊙ | ⊙ |
| WATER VALVE | ⊗ | ⊗ |
| CLEAN-OUT | ⊙ | ⊙ |
| SANITARY SEWER MANHOLE | ⊙ | ⊙ |
| FIRE HYDRANT | ⊗ | ⊗ |
| OVERHEAD POWER LINE | — OHL — | — OHL — |

UTILITY PLAN
 SCALE: 1" = 30'



2 SILT FENCE DETAIL

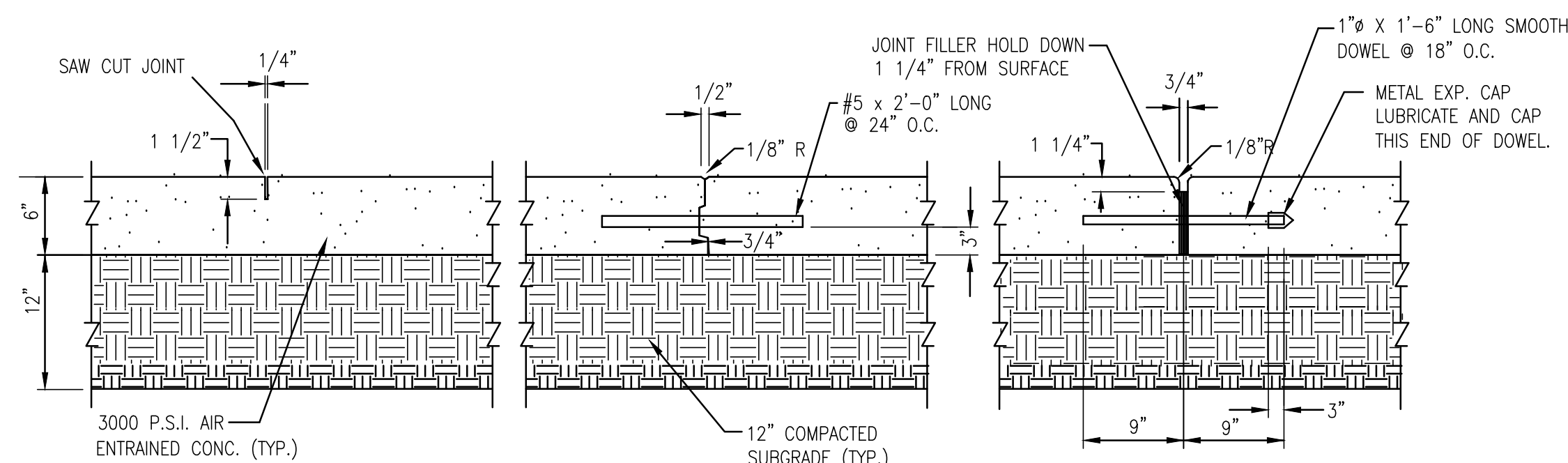
C401 NTS



3 CONC. SIDEWALK DETAIL

C401 1-1/2"=1'-0"

- NOTES:
1. A THICKENED EDGE SHALL BE PROVIDED BETWEEN SIDEWALK AND DRIVEWAYS OR PARKING LOT.
 2. SLOPE CONC. SIDEWALKS AWAY FROM BUILDINGS TO PROVIDE POSITIVE DRAINAGE.
 3. THE CROSS SLOPE OF THE SIDEWALK SHALL NOT EXCEED 2%.
 4. PROVIDE CONTROL JOINTS @ INTERVALS EQUAL TO SIDEWALK WIDTH (W).
 5. PROVIDE PREMOULDED EXPANSION JOINT WHERE CONC. WALK ABUTS BLDG., POLES, AND OTHER CONC. WALKS.



CONTRACTION JOINT (SAW JOINT C.J.)

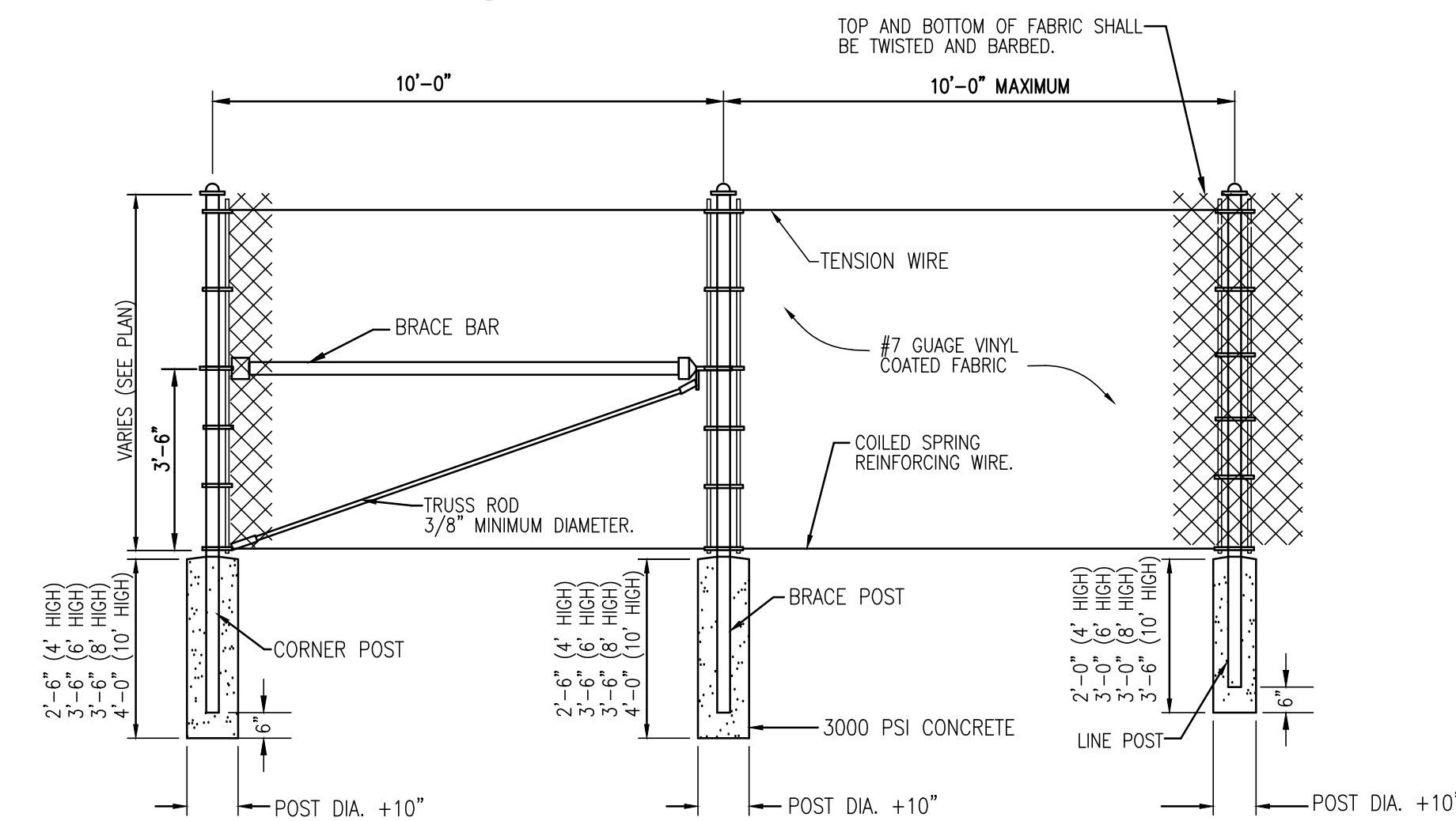
CONSTRUCTION JOINT (CS.J.)

EXPANSION JOINT (E.J.)

- NOTE:
1. PROVIDE 1/2" RADIUS ON ALL EXPOSED EDGES.
 2. PROVIDE THICKENED EDGE WHERE CONC. PAVING ABUTS ASPHALT PAVEMENT, BLDGS AND PERVIOUS AREAS.
 3. PROVIDE 1/2" PREMOULDED EXPANSION JOINT WHERE CONCRETE PAVEMENT ABUTS OTHER CONCRETE PAVEMENT, BUILDING, POLE, ETC.

5 CONC. PAVING DETAIL

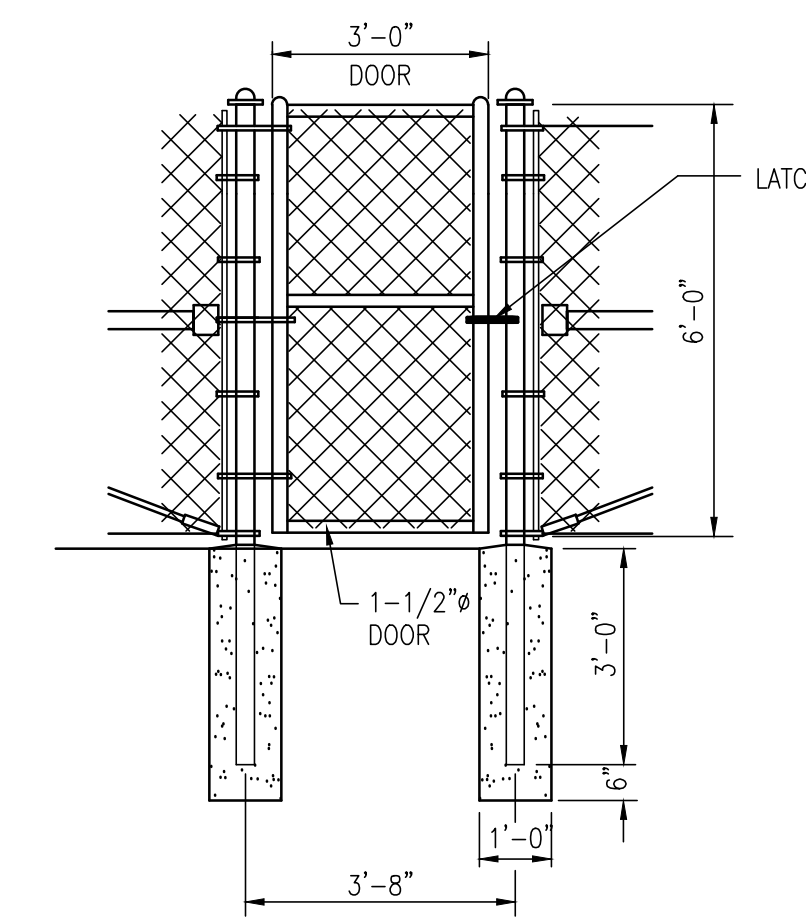
C401 1"=1'-0"



6 CHAIN LINK FENCE DETAIL

C401 3/8"=1'-0"

- NOTES:
1. ALL CHAINLINK FENCING FABRIC SHALL BE VINYL COATED. COLOR: BLACK
 2. ALL POSTS AND ACCESSORIES SHALL BE PAINTED BLACK TO MATCH FABRIC COLOR.



7 SINGLE GATE DETAIL

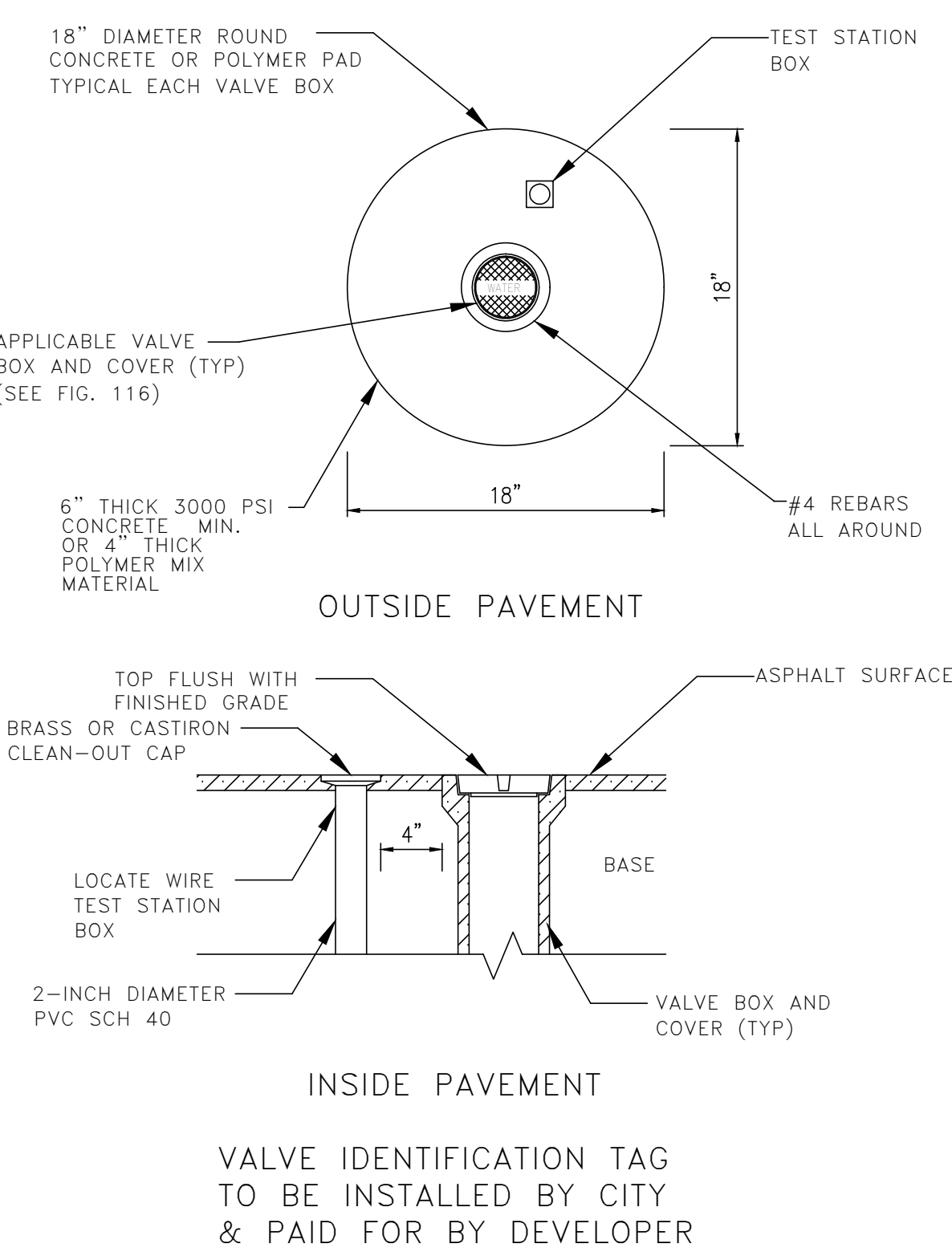
C401 3/8"=1'-0"

TREE PROTECTION NOTES:

1. TREES TO BE PRESERVED SHALL BE SURROUNDED BY 2X4 POSTS AT 8' ON CENTER MAXIMUM. INSTALL 2- 2X4 RAILS, THE TOP RAIL LOCATED AT A 42" HEIGHT. LOCATE PROTECTION FENCE AT TREE DRIP LINE. A MINIMUM PROTECTION DIAMETER IS 12" WIDTH PER 1" CALIPER OF THE TREE. INSTALL ORANGE CONSTRUCTION FENCE ON TOP OF THE 2X4 FENCING FOR SAFETY.
2. ALL TREE PROTECTION MEASURES SHALL CONFORM TO ALL ORANGE COUNTY LAND DEVELOPMENT REGULATIONS.
3. DO NOT STORE ANY PETROLEUM PRODUCTS, SOLVENTS, OR ANY CHEMICALS WITHIN THE PROTECTION ZONE.
4. DO NOT STORE ANY MECHANICAL EQUIPMENT OR GANGBOXES WITHIN THE PROTECTION ZONE.
5. DO NOT PARK ANY CONSTRUCTION VEHICLES, TRUCK, FOUR WHEELERS, PROJECT GOLF CARTS, ETC. WITHIN THE PROTECTION ZONE.
6. DO NOT THROW TRASH INTO OR STORE TRASH RECEPTACLES WITHIN THE TREE PROTECTION ZONE.
7. THE PROTECTION ZONE SHALL NOT BE USED AS A LUNCHEON AREA FOR ANY CONSTRUCTION WORKERS ON THE JOB SITE.
8. DO NOT STORE ANY PORT-O-LETS OR TEMPORARY ONSITE RESTROOM FACILITIES WITHIN THE PROTECTION ZONE.

1 TREE PROTECTION

C401 NTS



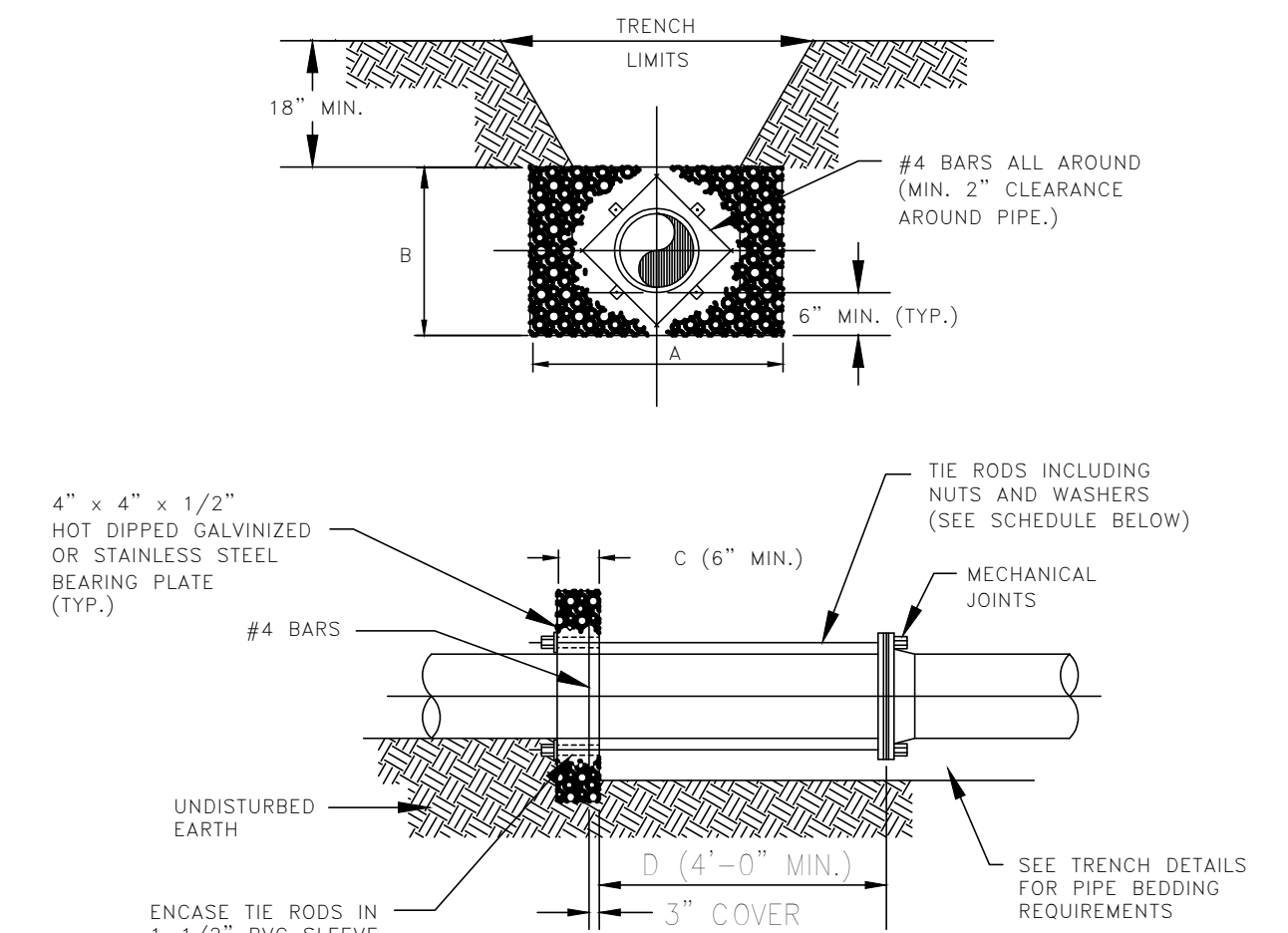
VALVE BOX

| | PIPE SIZE | | | | | | | | | | |
|----------------------------|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 6" | 8" | 10" | 12" | 16" | 18" | 20" | 24" | 30" | 36" | 48" |
| 90° BEND | 3.5 | 4.3 | 5.1 | 6.0 | | | | | | | |
| 45° BEND | 1.4 | 1.8 | 2.2 | 2.5 | | | | | | | |
| 22-1/2° BEND | 7 | 9 | 11 | 12 | | | | | | | |
| 11-1/4° BEND | 4 | 5 | 6 | 6 | | | | | | | |
| TEE** | 1 | 7 | 24 | 44 | | | | | | | |
| REDUCER (ONE SIZE SMALLER) | 41 | 39 | 40 | | | | | | | | |
| DEAD END | 74 | 96 | 115 | 136 | | | | | | | |

* ONLY RESTRAIN BRANCH PIPE FOR TEES, ONLY RESTRAIN LARGER PIPE FOR REDUCERS
 ** LENGTH ALONG RUN ASSUMED TO BE 18'

- NOTES:
1. FITTINGS SHALL BE DUCTILE IRON RESTRAINED JOINT TYPE. FM FITTINGS TO BE LINED WITH PROTECTO 401.
 2. INSTALL FULL LENGTHS OF PIPE WITH TOTAL LENGTH CONTAINING ONLY RESTRAINED JOINTS EQUAL TO OR GREATER THAN LENGTH SHOWN IN TABLE.
 3. WHERE TWO OR MORE FITTINGS ARE TOGETHER, USE FITTING WHICH YIELDS GREATEST LENGTH OF RESTRAINED PIPE.
 4. IN LINE VALVES AND THROUGH RUN OF TEES OUTSIDE LIMITS OF RESTRAINED JOINTS FROM OTHER FITTINGS NEED NOT BE RESTRAINED UNLESS OTHERWISE INDICATED.
 5. LENGTHS SHOWN IN THE TABLE HAVE BEEN CALCULATED IN ACCORDANCE WITH THE PROCEDURE OUTLINED IN "THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE" AS PUBLISHED BY DIPRA. FOR PVC WITH THE FOLLOWING ASSUMPTIONS:
 TYPE OF PIPE: PVC
 WORKING PRESSURE: 150 P.S.I.
 SOIL DESIGNATION: SMCBAND SBLD
 LAYING CONDITIONS: 3
 ** FM = 100 P.S.I. / WM OR RWM = 150 P.S.I.
 6. FOR PIPE ENCASED IN POLYETHYLENE INCREASE THE GIVEN VALUE BY A FACTOR OF 1.5.
 7. VALUES NOT LISTED IN THE TABLE TO BE COMPLETED BY THE ENGINEER.

RESTRAINED PIPE TABLE (PVC)



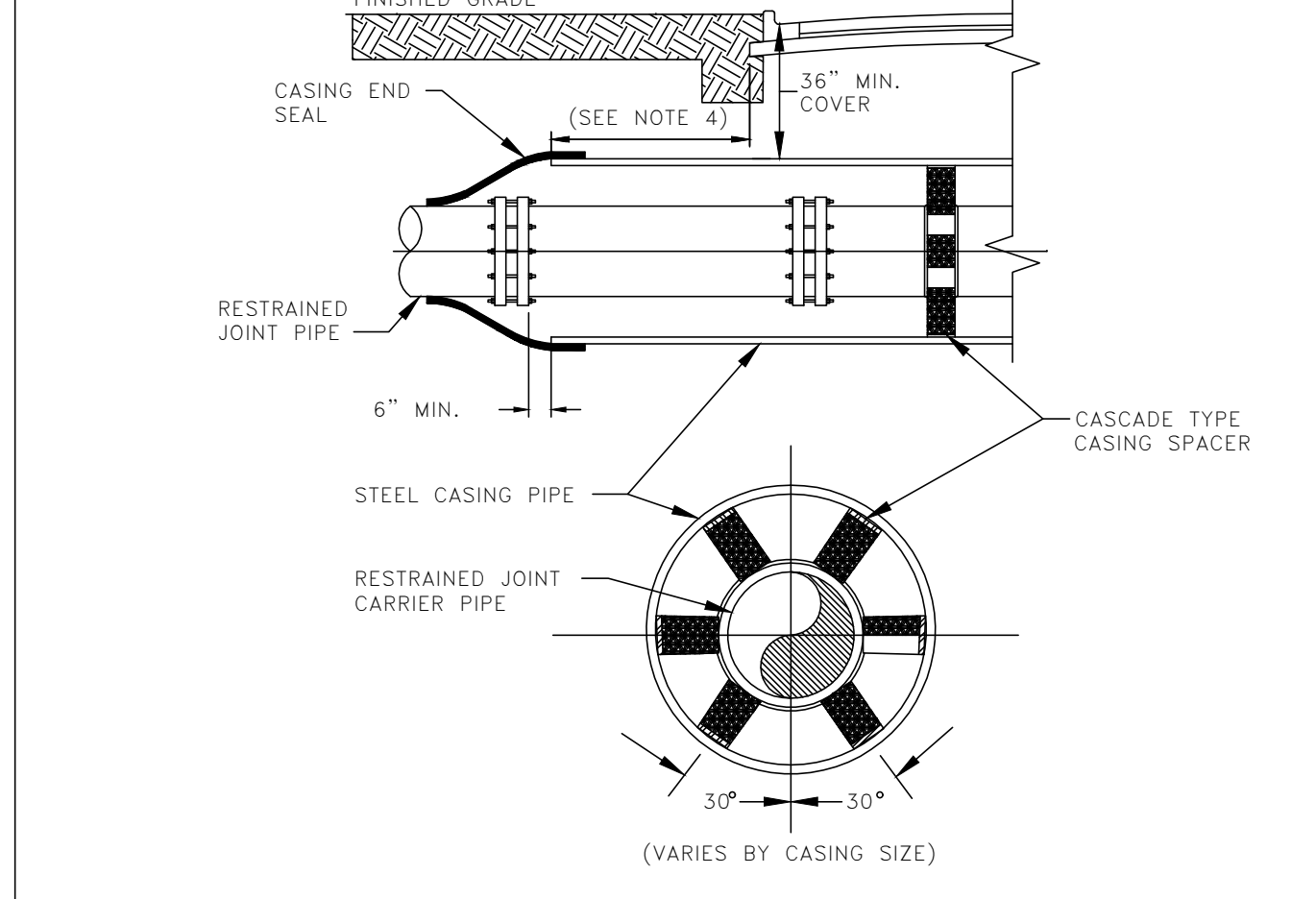
WATER MAIN THRUST COLLAR DETAIL

NOTES:

1. ADDITIONAL REINFORCEMENTS SHALL BE AS SPECIFIED BY THE ENGINEER.
2. MINIMUM COMPRESSIVE STRENGTH FOR CONCRETE SHALL BE 2500 P.S.I.
3. BEDDING, BACKFILL, AND COMPACTION SHALL BE AS SPECIFIED ELSEWHERE IN THE STANDARD DRAWINGS.
4. ALL FORM BOARDS SHALL BE REMOVED PRIOR TO BACKFILL.
5. NO ALLOWANCE SHALL BE MADE FOR FRICTION BETWEEN THE PIPE WALL AND THE THRUST COLLAR.
6. DESIGN PRESSURE: 150 P.S.I.

| PIPE SIZE (INCHES) | DIMENSIONS (FT.) | | | | TIE RODS REQ'D |
|--------------------|------------------|-----|-----|-----|----------------|
| | A | B | C | D | |
| 6 | 2.0 | 2.0 | 1.0 | 3/4 | 2 |
| 8 | 2.5 | 2.5 | 1.0 | 3/4 | 2 |
| 10 | 2.5 | 3.0 | 1.0 | 3/4 | 4 |
| 12 | 3.0 | 3.0 | 1.0 | 3/4 | 4 |
| 16 | 4.0 | 4.0 | 1.5 | 3/4 | 4 |
| 20 | 5.0 | 5.0 | 1.5 | 3/4 | 6 |
| 24 | 6.0 | 6.0 | 1.5 | 3/4 | 8 |

NOTE: THRUST BLOCK AREA TO BE COMPUTED ON BASIS OF 1500 P.S.I. PER SQ. FT. FOR RESTRAINED BEARING. * TO BE COMPLETED BY ENGINEER.

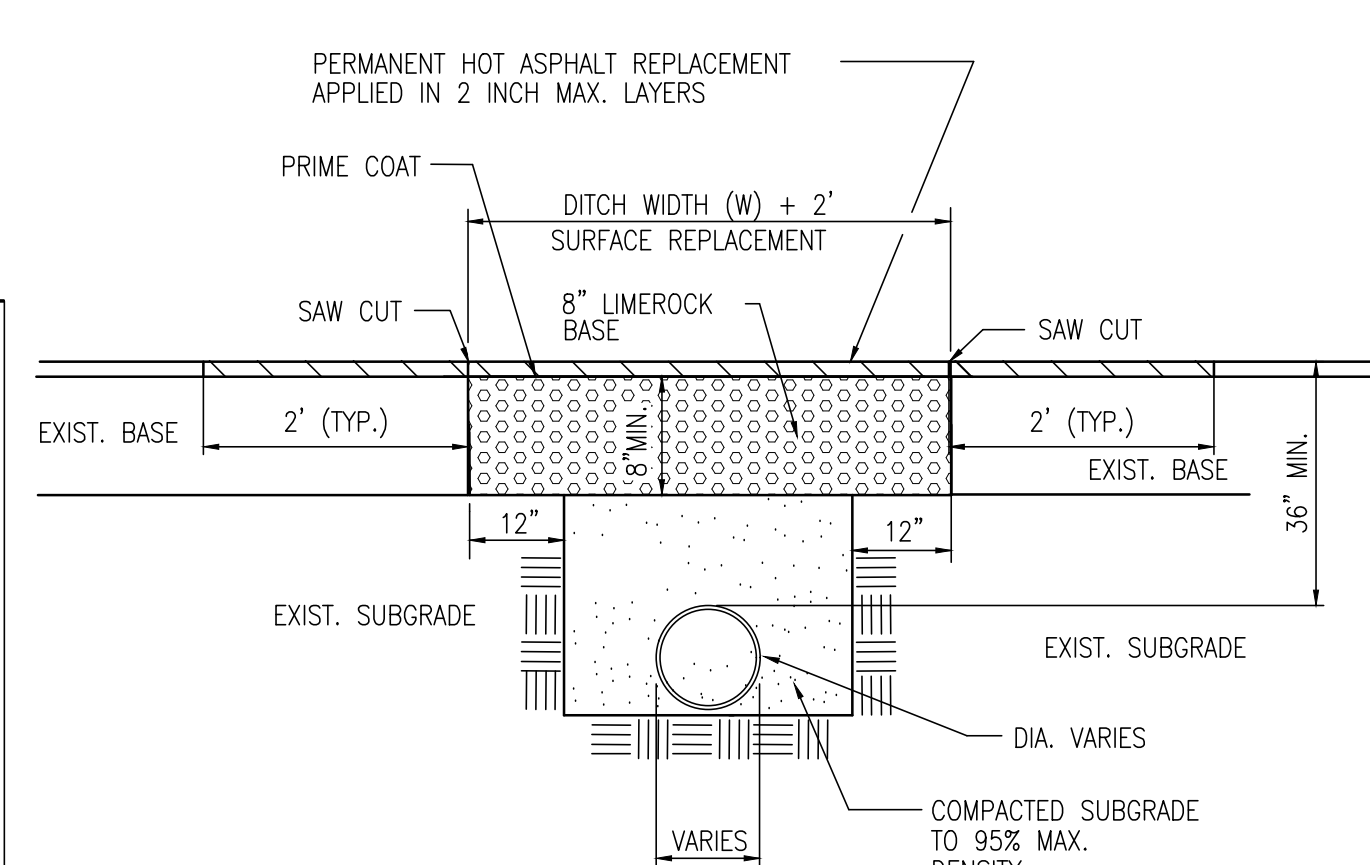


| CARRIER PIPE NOMINAL DIAMETER (INCHES) | (VARIES BY CASING SIZE) | | | | | | | | | | | |
|--|-------------------------|------|------|------|------|------|------|------|------|------|------|--|
| | 4 | 6 | 8 | 10 | 12 | 16 | 20 | 24 | 30 | 36 | 42 | |
| MINIMUM CASING OUTSIDE DIAMETER (INCHES) | 16 | 16 | 18 | 20 | 24 | 30 | 36 | 42 | 48 | 54 | 60 | |
| MINIMUM CASING WALL THICKNESS (INCHES) | 250* | 250* | 250* | 250* | 250* | 312* | 375* | 500* | 500* | 500* | 500* | |

NOTES:

1. WHEN CONSTRUCTION IS WITHIN FDOT OR RAILROAD JURISDICTION, ADDITIONAL REQUIREMENTS SHALL BE MET.
2. DISTANCE BETWEEN SPACERS TO BE PER MANUFACTURER'S SPECIFICATIONS.
3. NO FLOWABLE FILL BETWEEN THE ANNULAR SPACE OF THE CASING OR CARRIER PIPE.
4. WHERE PRACTICAL, CASING SHALL EXTEND 10 FEET BEYOND EDGE OF PAVEMENT AND SHALL NOT BE LESS THAN 6 FEET BEYOND EDGE OF PAVEMENT IN ANY CASE. THE CITY MAY REQUIRE LONGER CASING FOR DEEPER BORES.

BORING AND JACKING DETAIL



8 STD ROADWAY OPEN CUT

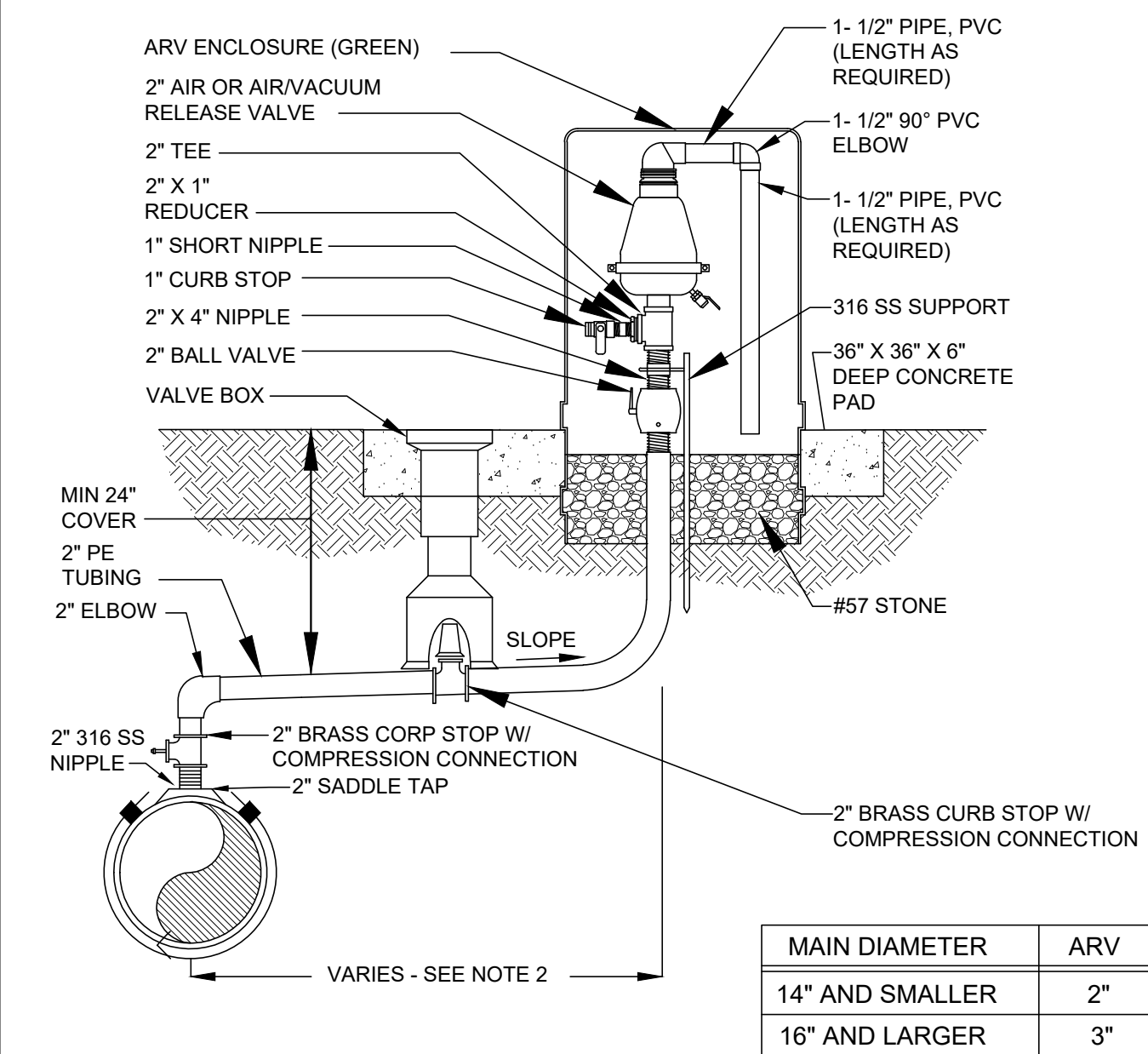
C401 NOT TO SCALE

- NOTE:
- SUBGRADE CUT TO BE COMPACTED TO 95% MAX. DENSITY AS DETERMINED BY AASHO T-180. CUT TO BE REPLACED WITH AN 8" 3000 PSI HIGH EARLY CONCRETE TO TOP OF EXISTING BASE. CUT AREA TO BE PLATED OR PROTECTED ON TEH DAY OF POUR. EXISTING SURFACE TO BE SAW CUT TO AN AREA 5 FEET BEYOND THE BASE CUT.
- GENERAL NOTES
1. BASE REPLACEMENT SHALL BE 3000 PSI HIGH EARLY STRENGTH CONCRETE.
 2. ASPHALTIC CONCRETE SURFACE MATERIAL SHALL BE REPLACED WITH THE SAME TYPE OF MATERIAL THAT EXISTED AT THE TIME OF REMOVAL OR AS APPROVED BY THE COUNTY ENGINEER.
 3. REPLACED BASE MATERIAL OVER THE MINIMUM ASPHALTIC CONCRETE SURFACE OVERLAY THICKNESS SHALL BE 1" OR AS APPROVED BY THE COUNTY ENGINEER.
 4. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED.
- PAVEMENT RESTORATION
1. LONGITUDINAL CUTS MAY REQUIRE OVERLAY/RESURFACING OF THE COMPLETE WIDTH OF THE TRAVELED WAY.
 2. CUTS AT INTERSECTIONS OF STREETS GENERALLY MAY REQUIRE A COMPLETE OVERLAY/RESURFACING TO THE END OF ALL RETURN RADII AND ALSO TO A POINT 10' BEYOND THE CUT, WHICHEVER IS GREATER.
 3. ACTUAL REQUIREMENTS WILL BE AS STATED ON TEH APPROVED PERMIT.

| PSI | MINIMUM PRESSURE RATING | | | | | | | |
|-----|-------------------------|------|----------------|------|--------------|------|------------|------|
| | DI FITTINGS | | PIPE MATERIAL* | | GATE VALVE** | | FORCEMAIN* | |
| | <24" | >24" | PVC | HDPE | <12" | >12" | PVC | HDPE |
| 100 | | | | | | | • | • |
| 150 | | | • | • | | • | | |
| 200 | | | | | • | | | |
| 250 | • | • | | | | | | |
| 350 | | | | | | | | |

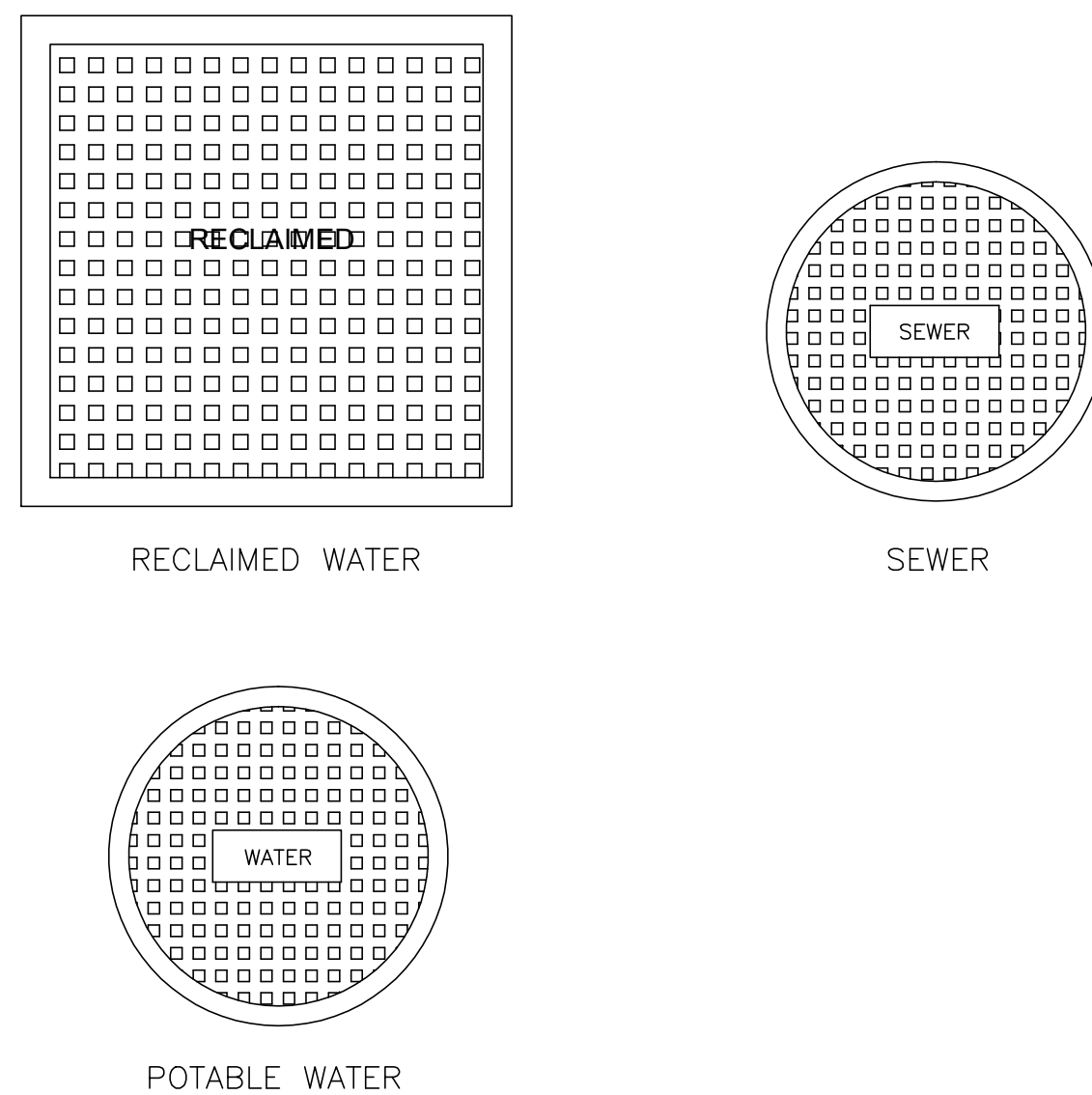
* PVC SHALL HAVE A MAXIMUM DIMENSION RATIO (DR) OF 18 AND HDPE SHALL BE MAX DR11. FORCEMAIN: PVC SHALL BE MAX DR18 UNLESS DESIGN REQUIRES OTHERWISE AND HDPE SHALL BE MAX DR17.
** BUTTERFLY VALVES SHALL BE CLASS 150B

PIPE AND APPURTENANCES PRESSURE RATING

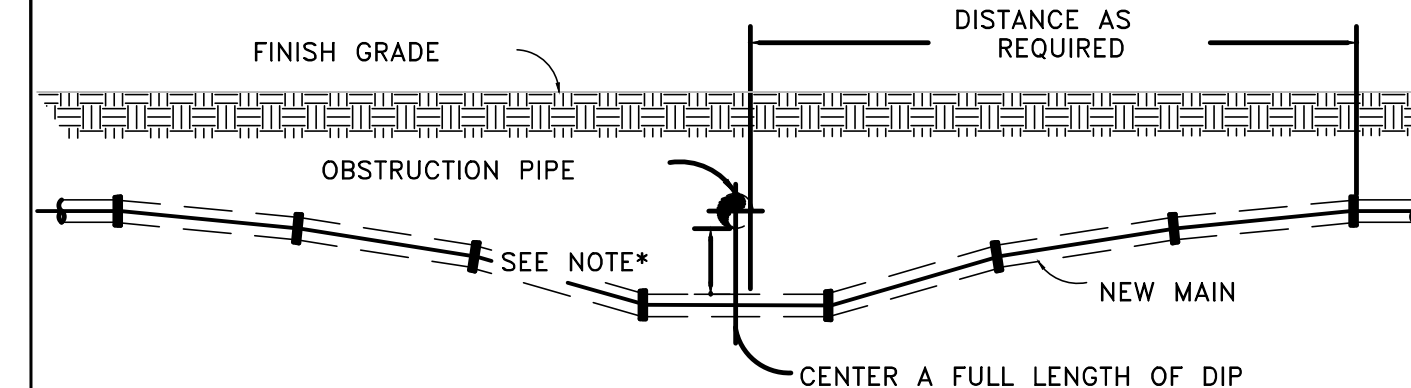


- NOTES:
1. FOR WASTEWATER USE ONLY.
2. OFFSET DISTANCE TO BE FIELD DETERMINED AND AS CLOSE TO THE R/W LINE AS POSSIBLE.
3. ADJUST HORIZONTAL LOCATION OF SIDEWALK, AS REQUIRED TO AVOID ARV ENCLOSURE.
4. LOCATE ARV ENCLOSURE WITHIN 6" OF R/W LINE.

OFFSET AIR OR COMBINATION AIR/VACUUM RELEASE VALVE DETAIL - WASTEWATER ONLY

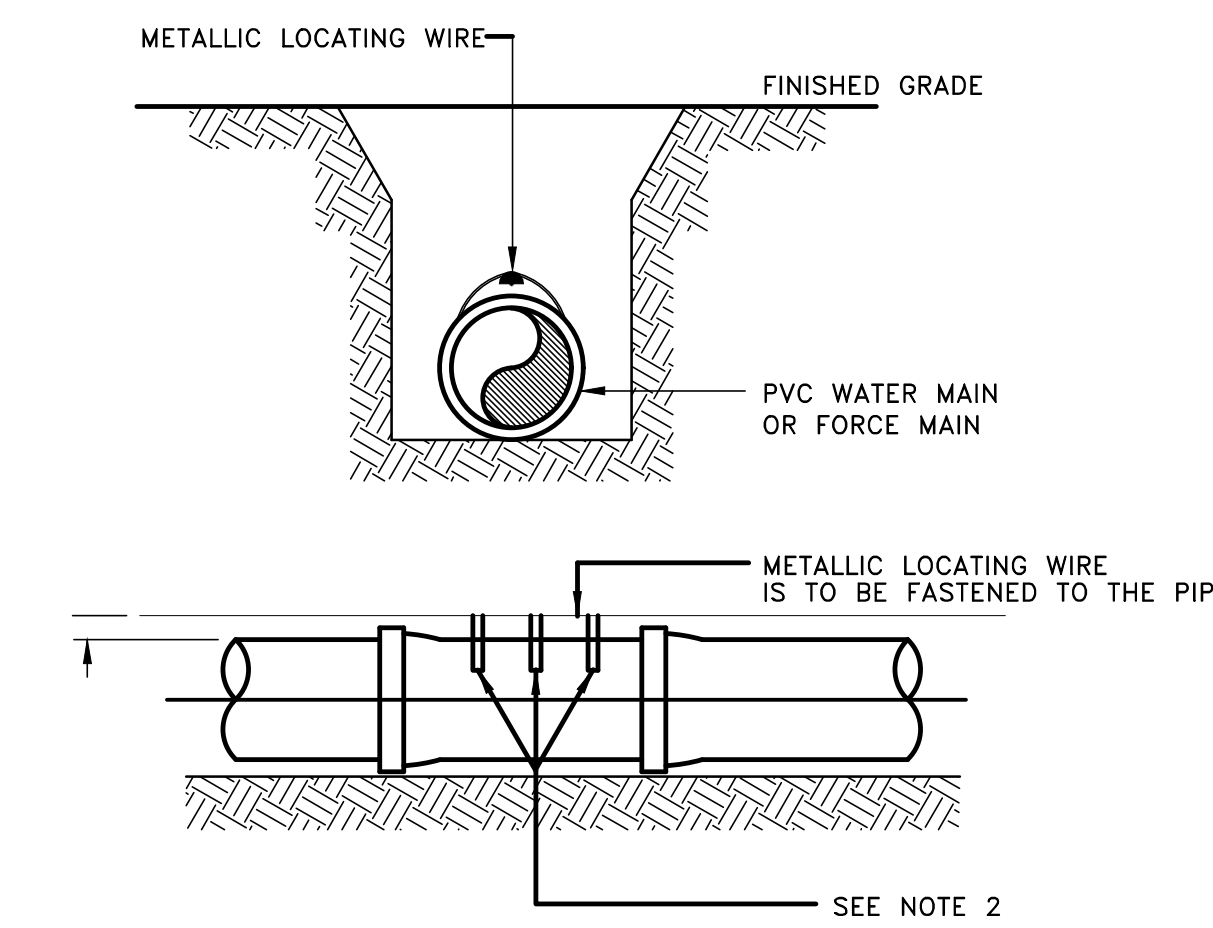


TYPICAL VALVE BOX COVER DETAILS



- NOTES:
1. 18" MINIMUM CLEARANCE FOR WATER, SEWER AND RECLAIMED WATER MAIN CROSSINGS.
2. 12" MINIMUM CLEARANCE REQUIRED FOR OTHER TYPE UTILITY CROSSINGS.
3. SEE ENCASUREMENT DETAIL IF MINIMUM CLEARANCE CANNOT BE OBTAINED.
* CONSTRUCT UNIFORM PIPE DEFLECTION NOT TO EXCEED 75% OF MANUFACTURER RECOMMENDED MAXIMUM DEFLECTION PER PIPE JOINT

UTILITY CROSSING PIPE DEFLECTION DETAIL



- NOTES:
1. PVC PIPE SHALL REQUIRE INSULATED METALLIC LOCATING WIRE (10 AWG-SOLID CCS REINFORCED TRACER WIRE-INSULATED 30 MIL HOPE - 30 VOLT MFG. BY COPPERHEAD INDUSTRIES, LLC OR EQUAL) CAPABLE OF DETECTION BY A CABLE LOCATOR.
2. SHALL BE BURIED DIRECTLY ABOVE THE CENTERLINE OF THE PIPE AND ATTACHED WITH DUCT TAPE OR NYLON STRAPS AT 3 LOCATIONS PER JOINT. LOCATING WIRE SHALL TERMINATE AT THE TEST STATION BOX AS SHOWN IN FIG. 109.
3. BE CAPABLE OF EXTENDING 12" ABOVE TOP OF TEST STATION BOX IN SUCH A MANNER SO AS NOT TO INTERFERE WITH VALVE OPERATION.
4. SPLICES SHOULD BE MADE USING STANDARDS AND PRODUCTS DESIGNED FOR DIRECT BURIAL CONDUCTORS.
5. WIRE INSULATION SHALL BE COLOR CODED FOR THE TYPE OF PIPE BEING INSTALLED.

PVC PIPE LOCATING WIRE DETAIL

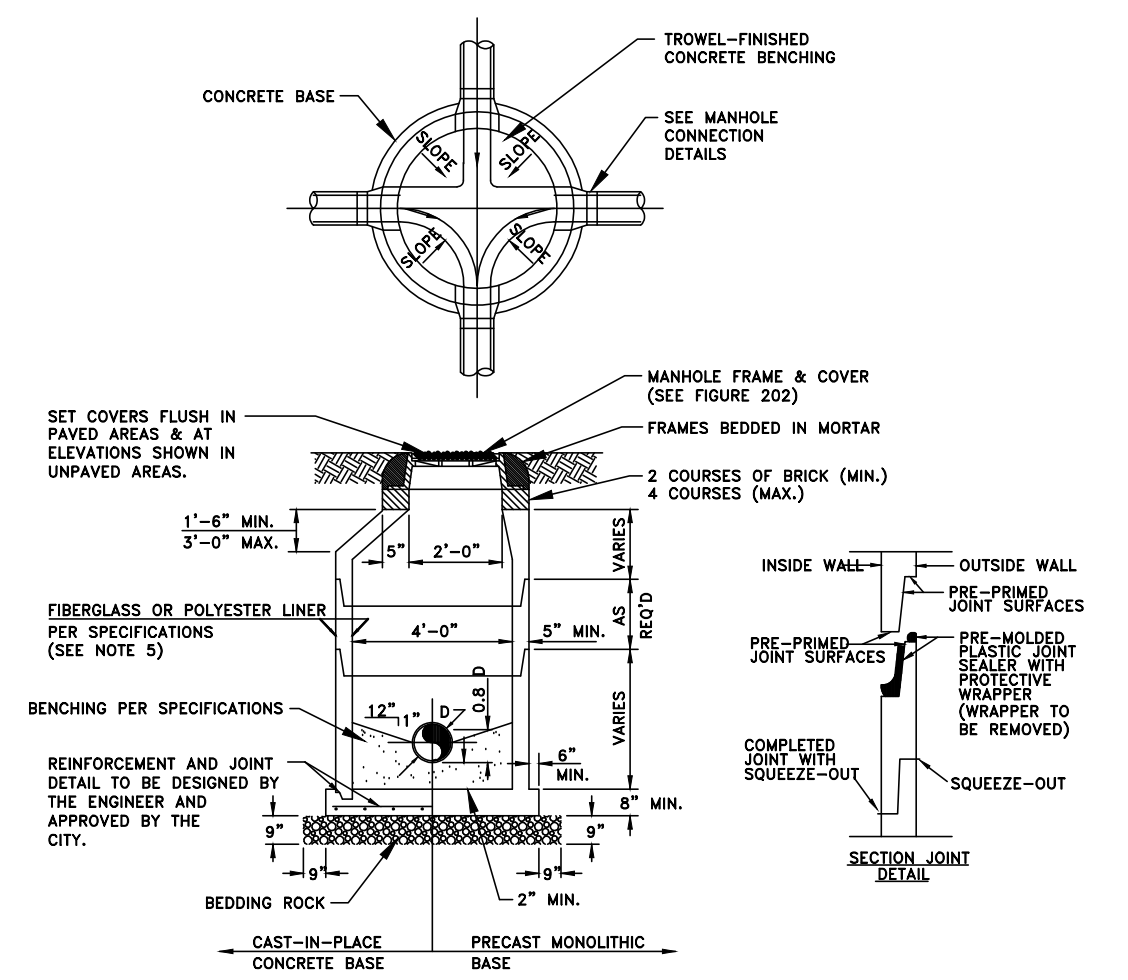
CITY OF APOPKA JANUARY 2014 FIG. 110

CITY OF APOPKA JANUARY 2015 FIG. 114

CITY OF APOPKA JANUARY 2014 FIG. 116

CITY OF APOPKA JANUARY 2014 FIG. 117

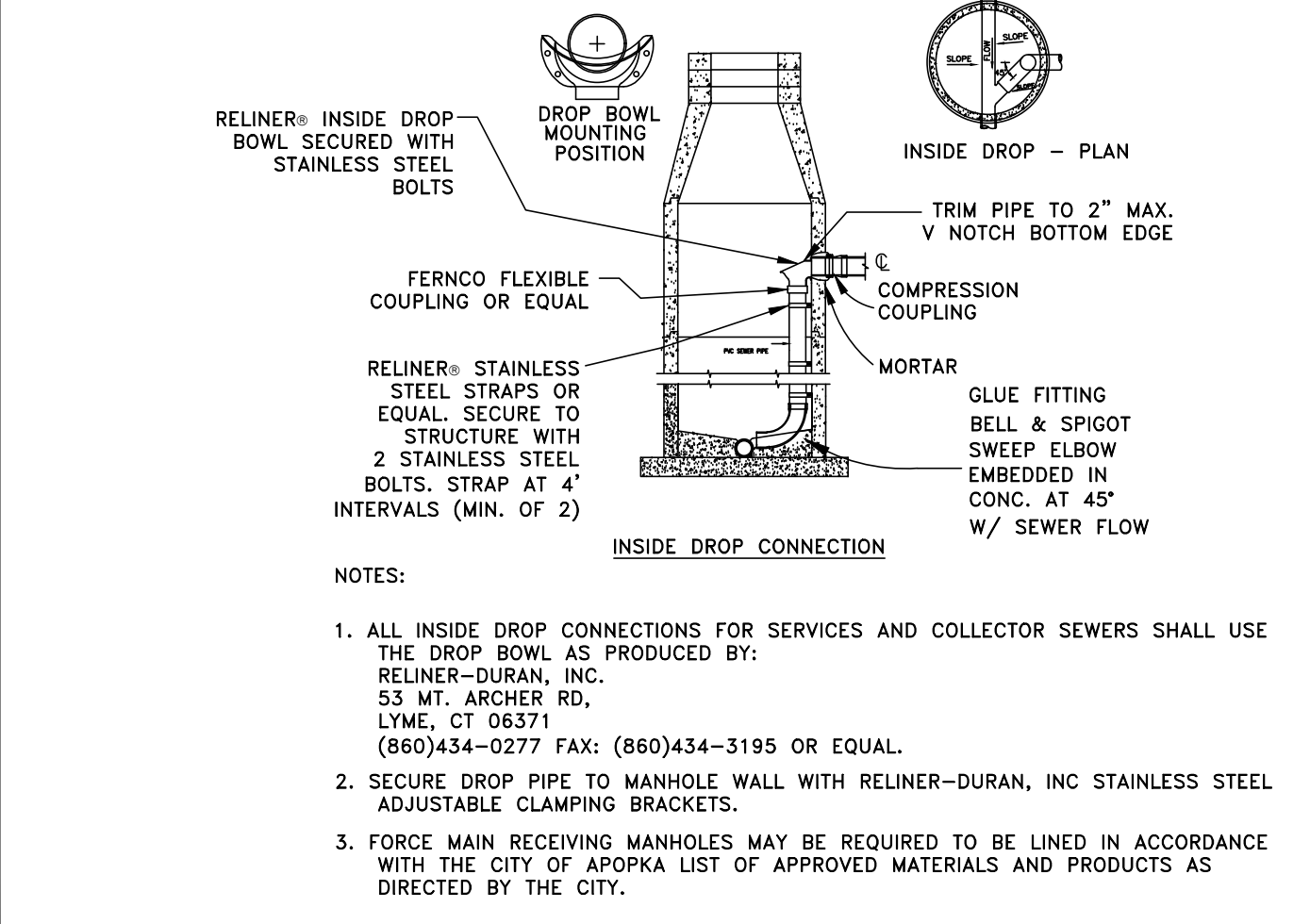
CITY OF APOPKA JANUARY 2014 FIG. 118



THICKNESS (INCHES) TABLE

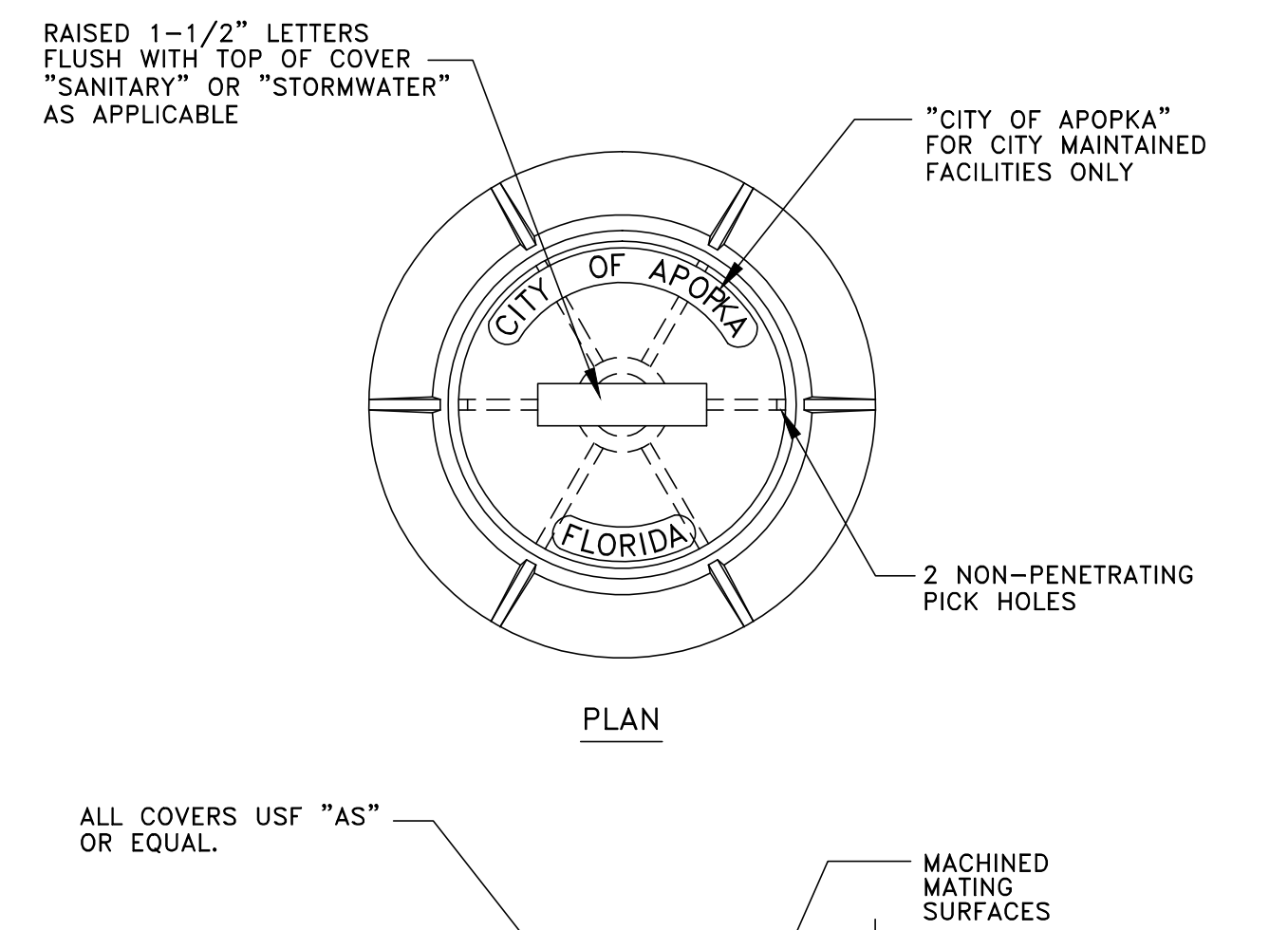
- NOTES:
1. MANHOLE SHOWN IS FOR SEWER SIZE 8" THRU 24". SEE SECTION 20.4 OF THE MANUAL FOR MANHOLE DIAMETER FOR SEWERS LARGER THAN 24".
2. DROP CONNECTIONS ARE REQUIRED WHENEVER INVERT OF INFLUENT SEWER IS 24" OR MORE ABOVE THE INVERT OF THE MANHOLE. SEE MANHOLE CONNECTION DETAILS.
3. THE THICKNESS OF THE LINER SHALL BE 3/8" MINIMUM.
4. EACH BENCH WALL SHALL BE A MINIMUM OF 18 INCHES LONG FROM THE WALL OF THE MANHOLE TOWARD THE CENTER.
5. SANITARY SEWER MANHOLES MAY BE REQUIRED TO BE LINED IN ACCORDANCE WITH THE CITY OF APOPKA LIST OF APPROVED MATERIALS AND PRODUCTS AS DIRECTED BY THE CITY.

TYPICAL MANHOLE



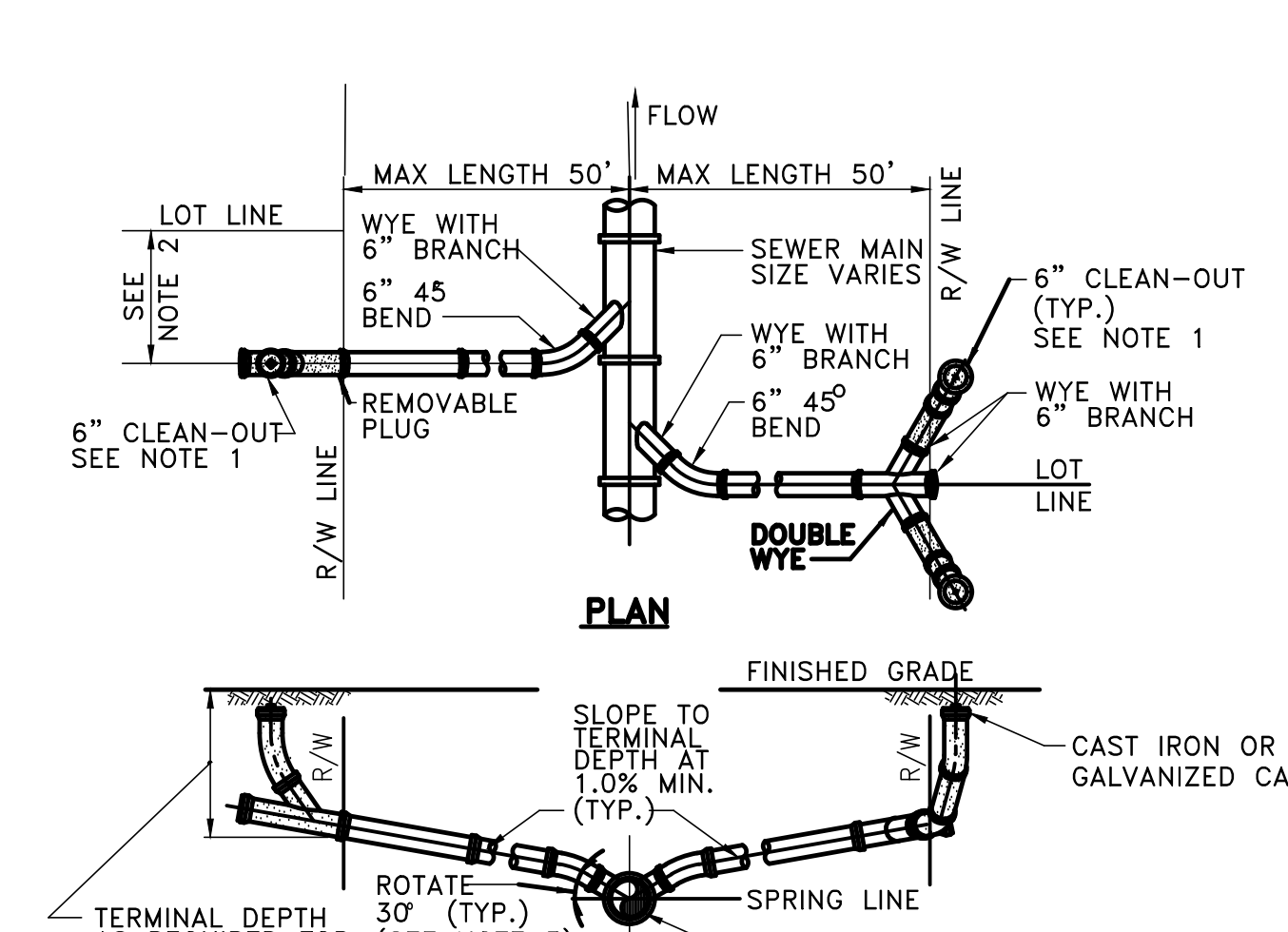
- NOTES:
1. DROP PIPE AND FITTINGS SHALL BE OF EQUAL SIZE AND MATERIAL AS THE INFLUENT SEWER.
2. THE CITY MAY APPROVE ALTERNATE WATER TIGHT CONNECTION DETAILS FOR CONNECTION OF 24" DIAMETER PIPES AND LARGER.
3. AN INSIDE DROP CONNECTION SHALL BE REQUIRED FOR ALL INFLUENT WHICH HAVE AN INVERT 24" OR MORE ABOVE THE OUTFLOW PIPE INVERT.
4. CONCRETE TO BE MINIMUM OF 3000 PSI.

MANHOLE CONNECTION DETAILS



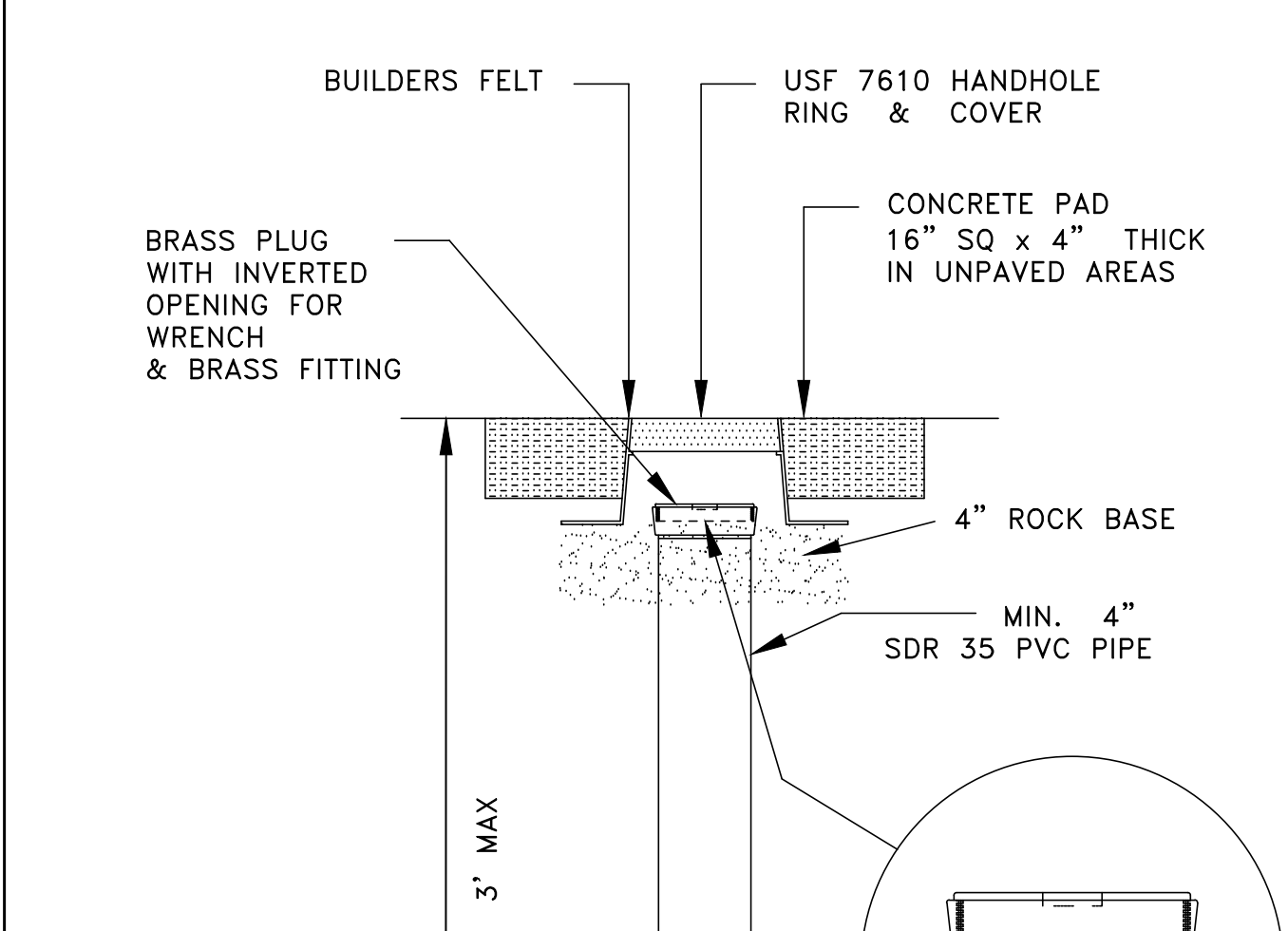
- NOTES:
1. MANHOLE FRAME AND COVER ARE TO BE TRAFFIC BEARING RATED H-20, CLASS 30 MEETING ASTM A 48.
ALL COVERS USE "AS" OR EQUAL.
MANHOLE FRAME: USF "227" INLET FRAME: USF "1295" OR EQUAL.

STANDARD MANHOLE FRAME AND COVER



- NOTES:
1. CLEAN-OUT (SHOWN SHADED) SHALL BE INSTALLED BY THE BUILDER IN ACCORDANCE WITH STANDARD PLUMBING CODE.
2. LOCATE SINGLE LATERAL AS CLOSE TO LOT LINE AS POSSIBLE.
3. INVERT OF SERVICE LATERAL SHALL NOT ENTER SEWER MAIN BELOW SPRING LINE.
4. RESIDENTIAL SERVICES SHALL BE 4 INCHES & NON-RESIDENTIAL SERVICES SHALL BE 6 INCHES IN DIAMETER AS A MINIMUM.
5. GALVANIZED OR CAST IRON CLEAN-OUT CAP SHALL BE USED ON THE STUBOUT FOR EACH SERVICE.
6. LATERAL SHALL BE MARKED WITH AN "S" STAMPED OR CUT IN THE CURB.

SERVICE LATERAL DETAIL



- NOTES:
1. REQUIREMENTS OF FIG. 204 APPLY

SANITARY SEWER SERVICE TRAFFIC RATED CLEAN-OUT DETAIL

CITY OF APOPKA JANUARY 2015 FIG. 200

CITY OF APOPKA JANUARY 2015 FIG. 201

CITY OF APOPKA JANUARY 2014 FIG. 202

CITY OF APOPKA JANUARY 2014 FIG. 204

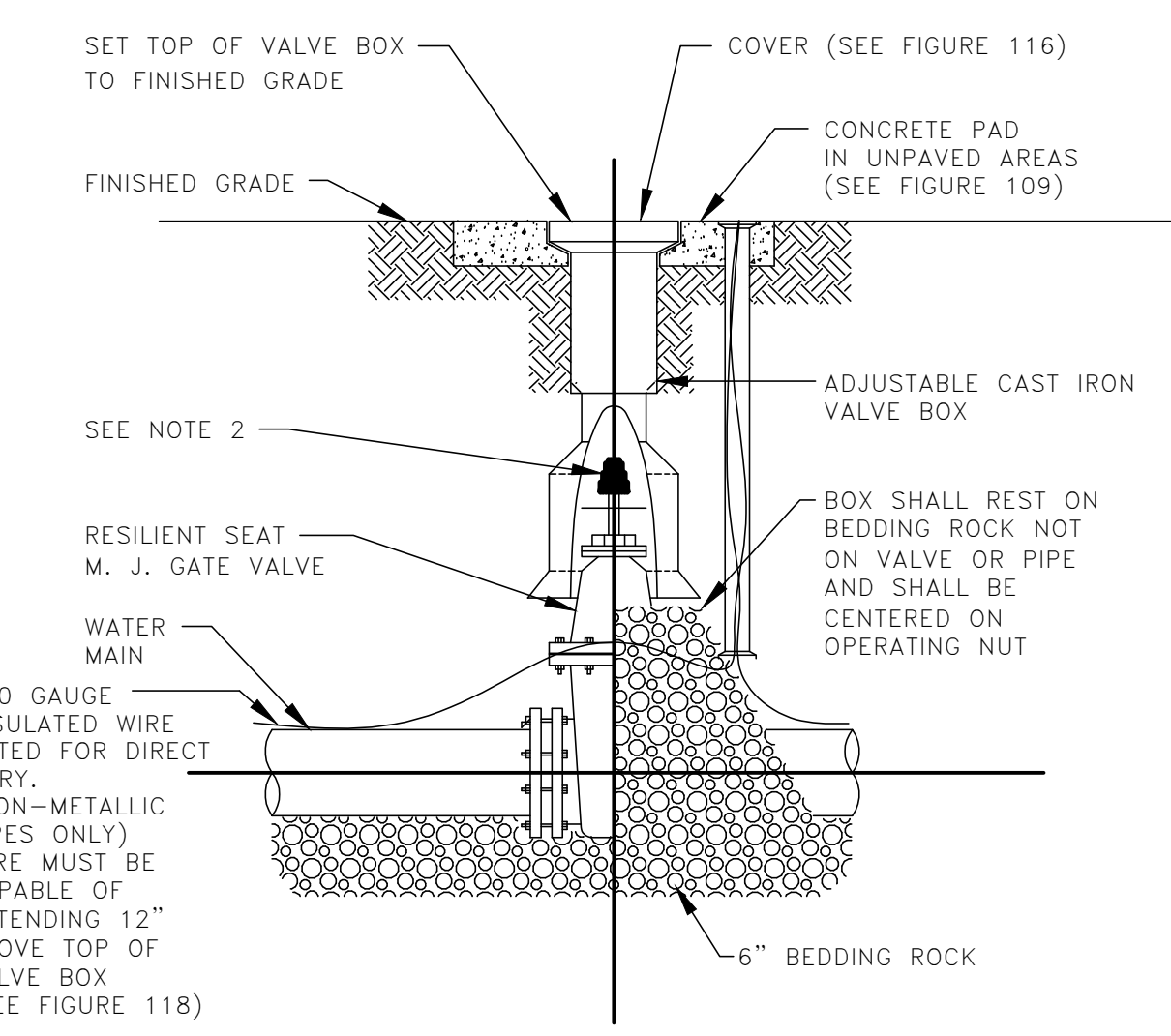
CITY OF APOPKA JANUARY 2014 FIG. 205

ENGINEERING PLANNING
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TELEPHONE 407-629-4288 #FACSIMILE 407-629-6556 #EE# 7080

Seal: Majid Kalaghchi P.E., 41046
ORANGE COUNTY GOVERNMENT FLORIDA

CITY OF APOPKA DETAIL SHEET
UTILITY EXTENSION
MAGNOLIA PARK ECO-TOURISM
OC CAPITAL PROJECTS
ORANGE COUNTY, FL

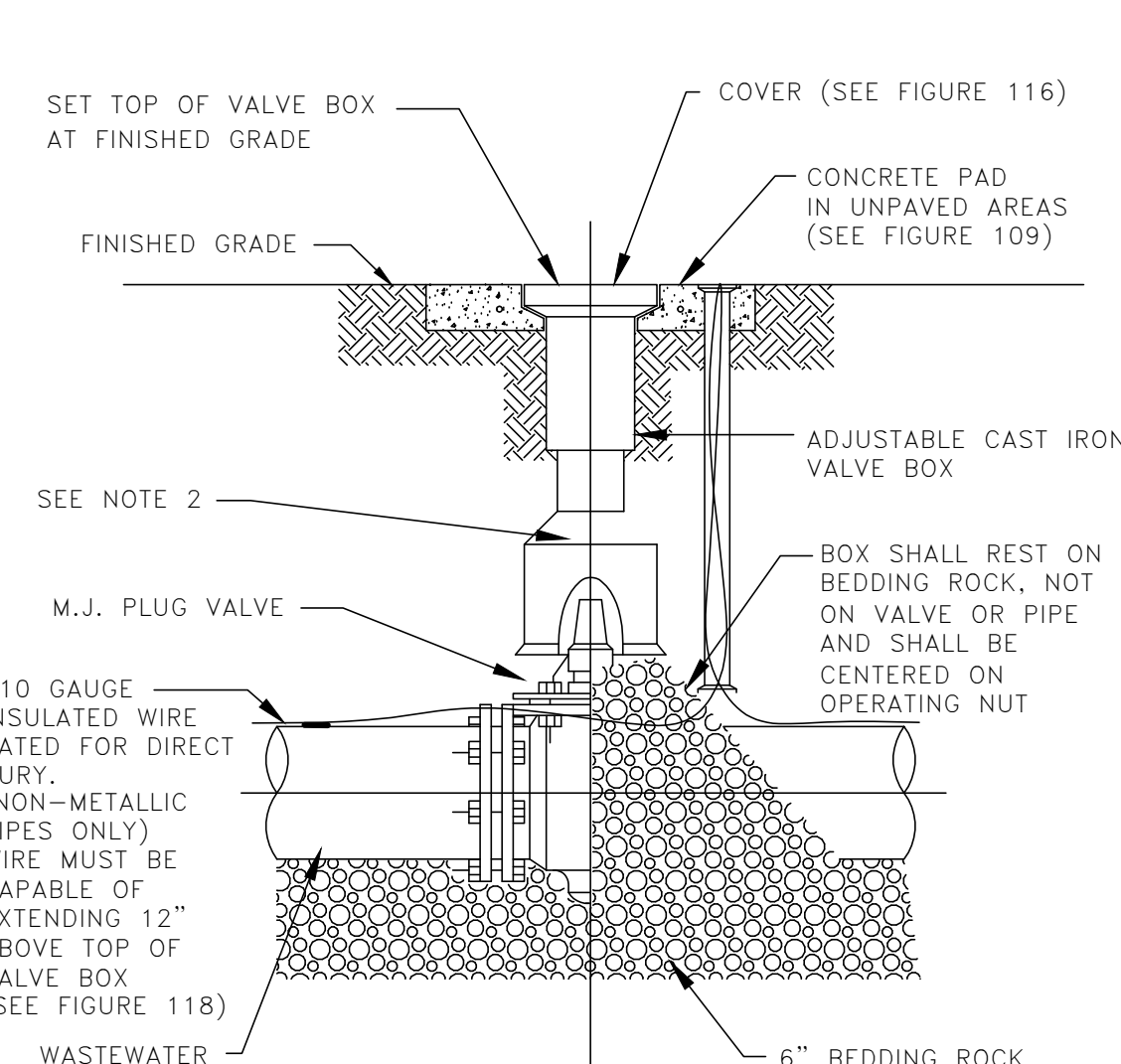
30% DESIGN DEVELOPMENT 2-28-18
60% CONSTRUCTION DOCS 10-22-18
100% PERMIT SET 10-31-18
Issue Date and Purpose
Project Number: 1733
Drawn by: B. FORSYTH
Checked by: M. KALAGHCHI
File No: C402



NOTES:

1. PVC EXTENSIONS MAY BE USED ON VALVE BOX INSTALLATION.
2. THE ACTUATING NUT FOR DEEPER VALVES SHALL BE EXTENDED TO WITHIN A 3 FEET BELOW FINISHED GRADE.

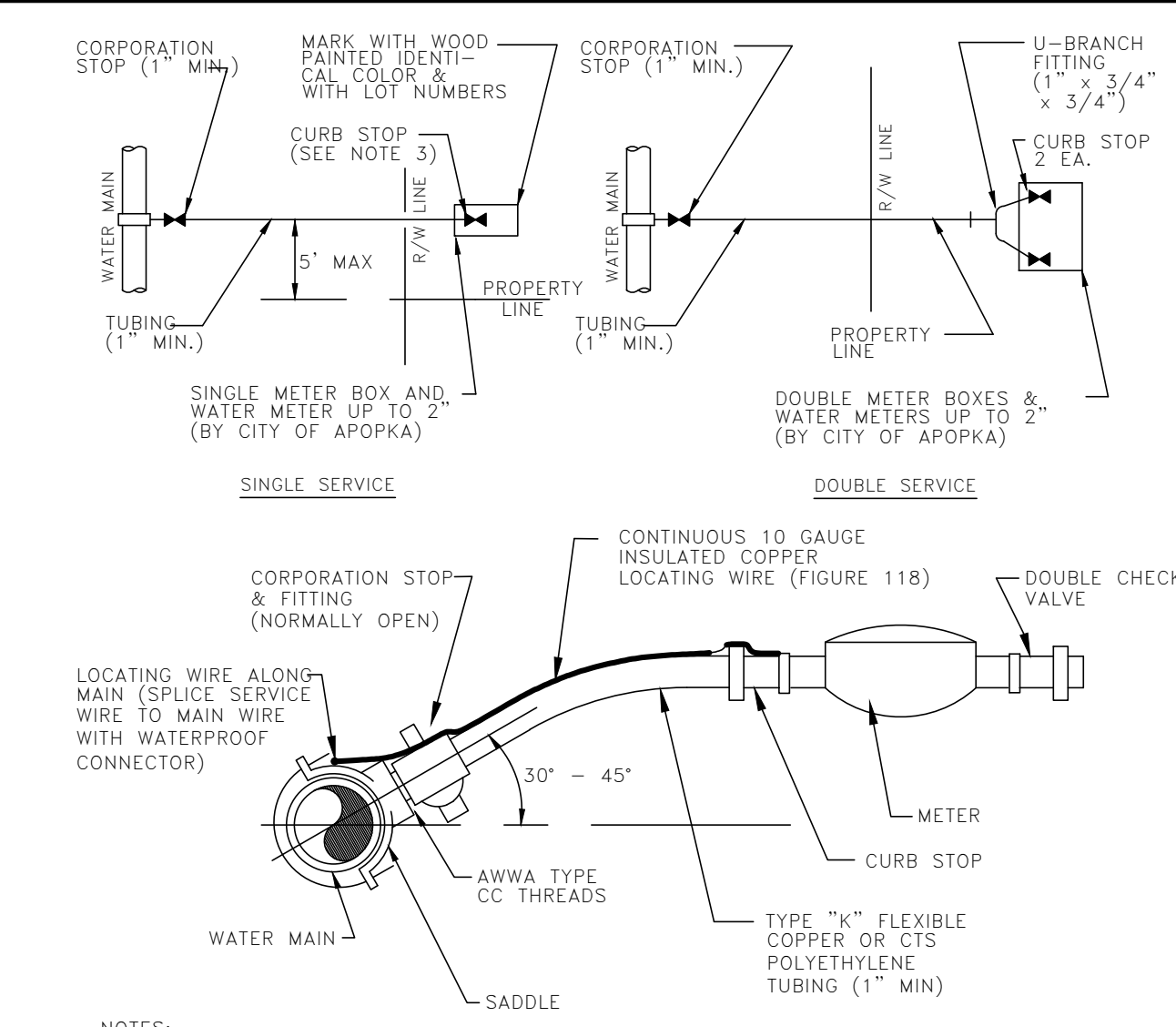
GATE VALVE AND BOX DETAIL



NOTES:

1. PVC EXTENSIONS MAY BE USED ON VALVE BOX INSTALLATION.
2. THE ACTUATING NUT FOR DEEPER VALVES SHALL BE EXTENDED TO WITHIN 3 FEET BELOW FINISHED GRADE.

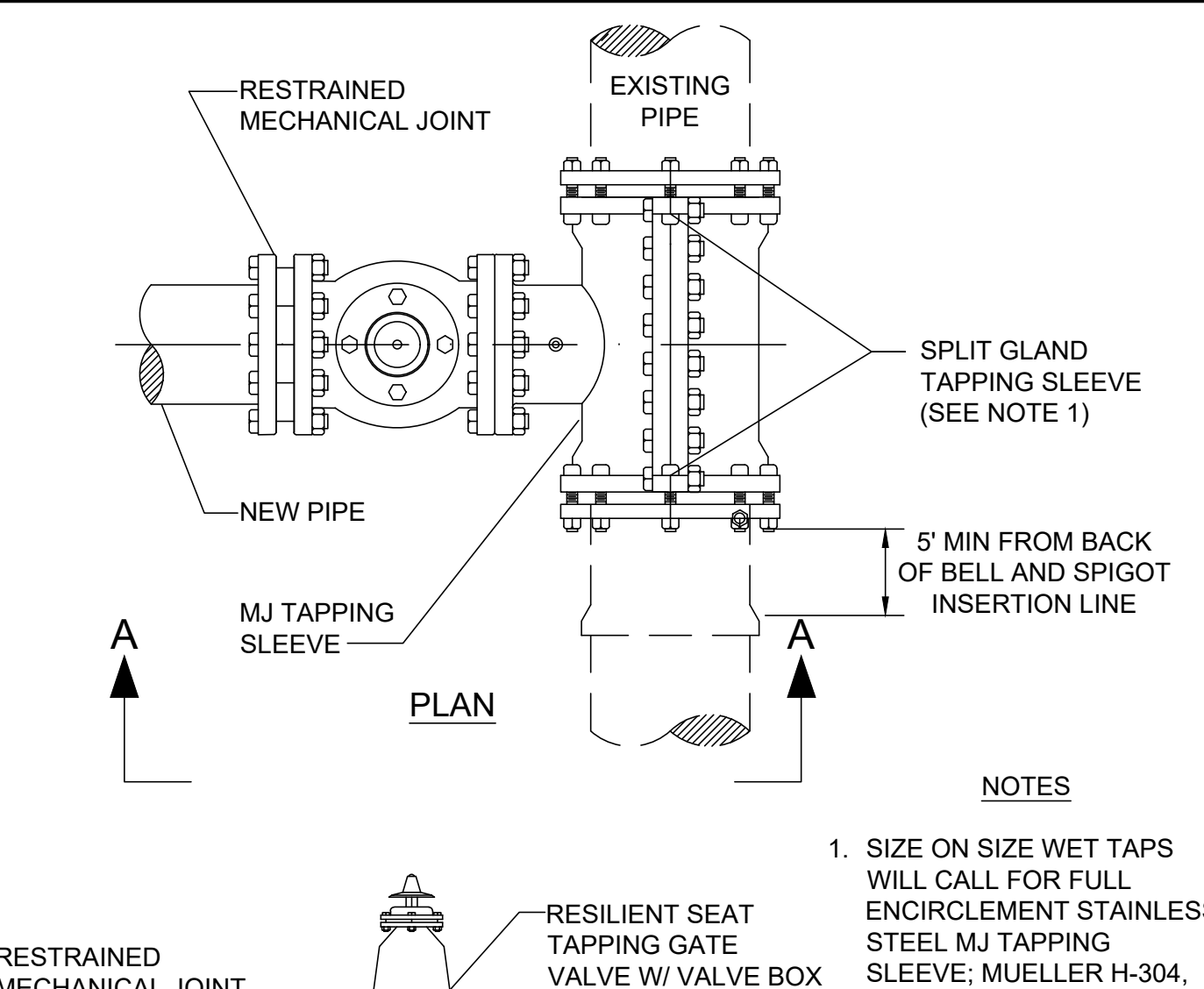
PLUG VALVE AND BOX DETAIL



NOTES:

1. ALL FITTINGS SHALL BE BRASS WITH COMPRESSION/PACK JOINT TYPE CONNECTIONS.
2. NO SERVICE LINE SHALL TERMINATE UNDER A DRIVEWAY.
3. EACH SERVICE SHALL TERMINATE AT A CURB STOP(S) WHICH SHALL BE BURIED APPROXIMATELY 3" BELOW FINAL GRADE AND SHALL BE CLEARLY MARKED WITH A 2" x 2" x 1/4" STAKE WITH THE TOP PAINTED BLUE FOR POTABLE WATER AND PURPLE FOR RECLAIMED WATER, AND MARKED WITH THE NUMBER OF THE LOT(S) TO BE SERVED.
4. RECLAIMED WATER SERVICES SHALL USE PURPLE COLORED CTS POLYETHYLENE TUBING.
5. POTABLE WATER SERVICES SHALL USE BLUE COLORED CTS POLYETHYLENE TUBING.
6. ALL SERVICE UNDER EXISTING OR PROPOSED PAVEMENT SHALL BE INSTALLED IN A MINIMUM 2" PVC SLEEVE.

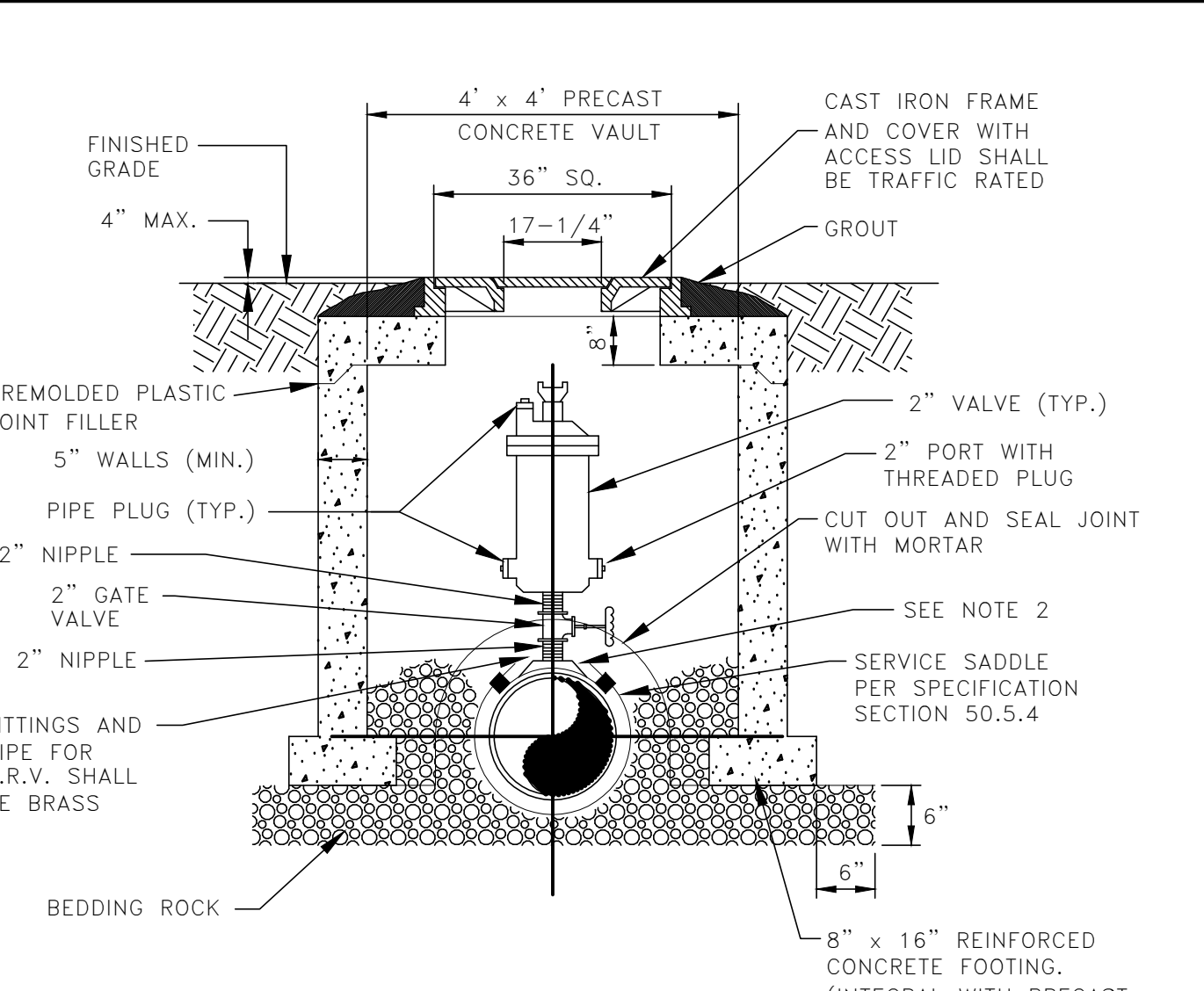
WATER SERVICE CONNECTION DETAIL



NOTES:

1. SIZE ON SIZE WET TAPS WILL CALL FOR FULL ENCIRCLEMENT STAINLESS STEEL MJ TAPPING SLEEVE; MUELLER H-304, OR EQUAL.
2. ALL NEWLY INSTALLED TAPPING SLEEVES & TAPPING VALVES SHALL BE PNEUMATICALLY TESTED AT A TEST PRESSURE OF 150PSI FOR A PERIOD OF THIRTY MINUTES.

WATER AND RECLAIMED WATER MAINS WET TAP TIE-IN DETAIL



NOTES:

1. ABOVE DETAIL IS BASED ON 2 INCH COMBINATION AIR/VACUUM RELEASE VALVE. CHANGE PIPE AND FITTINGS ACCORDINGLY FOR OTHER VALVE SIZES AND TYPES. VALVE SIZES TO BE DETERMINED BY THE ENGINEER AND APPROVED BY THE CITY PRIOR TO INSTALLATION.
2. THE MINIMUM DIMENSION FROM TOP OF PIPE TO FINISHED GRADE SHALL BE 4.0 FEET.
3. ALL STRUCTURES TO BE TRAFFIC BEARING RATED.

AIR OR COMBINATION AIR/VACUUM RELEASE VALVE DETAIL - UNDERGROUND

CITY OF APOPKA
DESIGN ENGINEERING DIVISION

JANUARY 2014

FIG. 400

CITY OF APOPKA
DESIGN ENGINEERING DIVISION

JANUARY 2014

FIG. 400 A

CITY OF APOPKA
DESIGN ENGINEERING DIVISION

JANUARY 2014

FIG. 405

CITY OF APOPKA
DESIGN ENGINEERING DIVISION

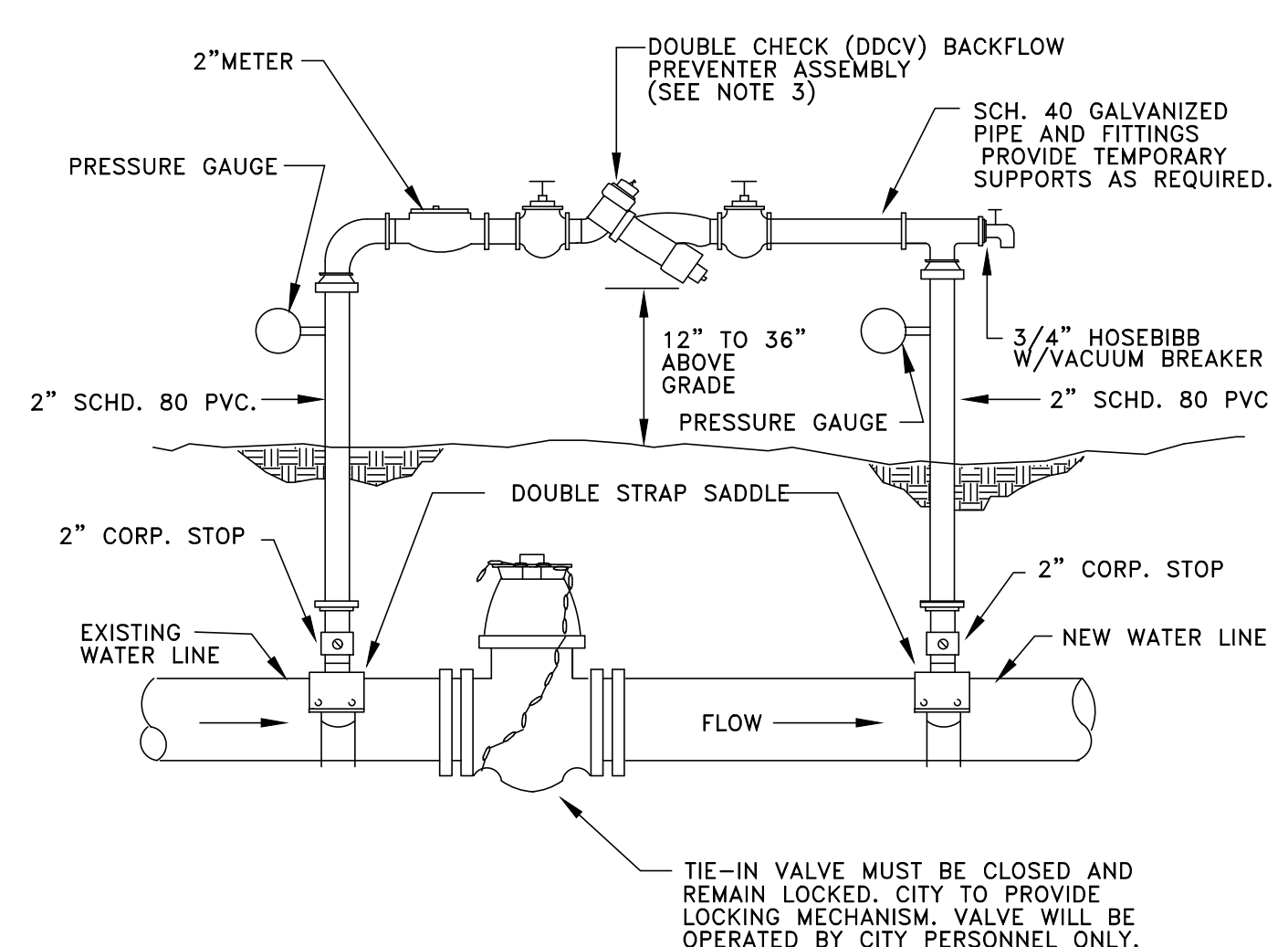
JANUARY 2014

FIG. 406

CITY OF APOPKA
DESIGN ENGINEERING DIVISION

JANUARY 2014

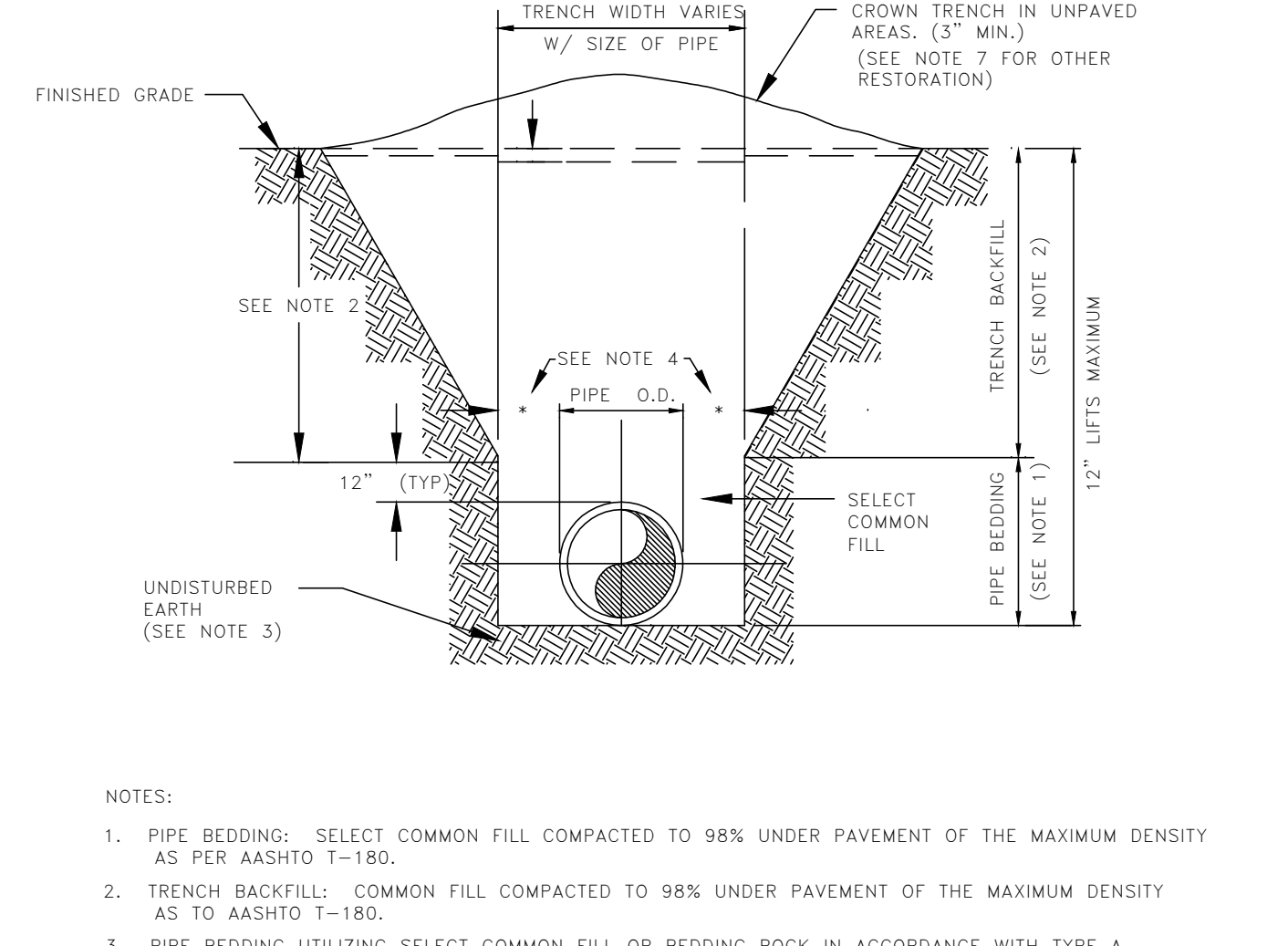
FIG. 119



NOTE:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS, ASSEMBLY, AND THE INSTALLATION OF THE DEVICE.
2. SEE FIGURE 504C FOR PROCEDURES.
3. DDCV IS MINIMUM PROTECTION REQUIRED. A RPZ DEVICE MAY BE REQUIRED DEPENDING ON PROJECT. PROVIDE COPY OF LATEST CERTIFICATION TEST RESULTS.

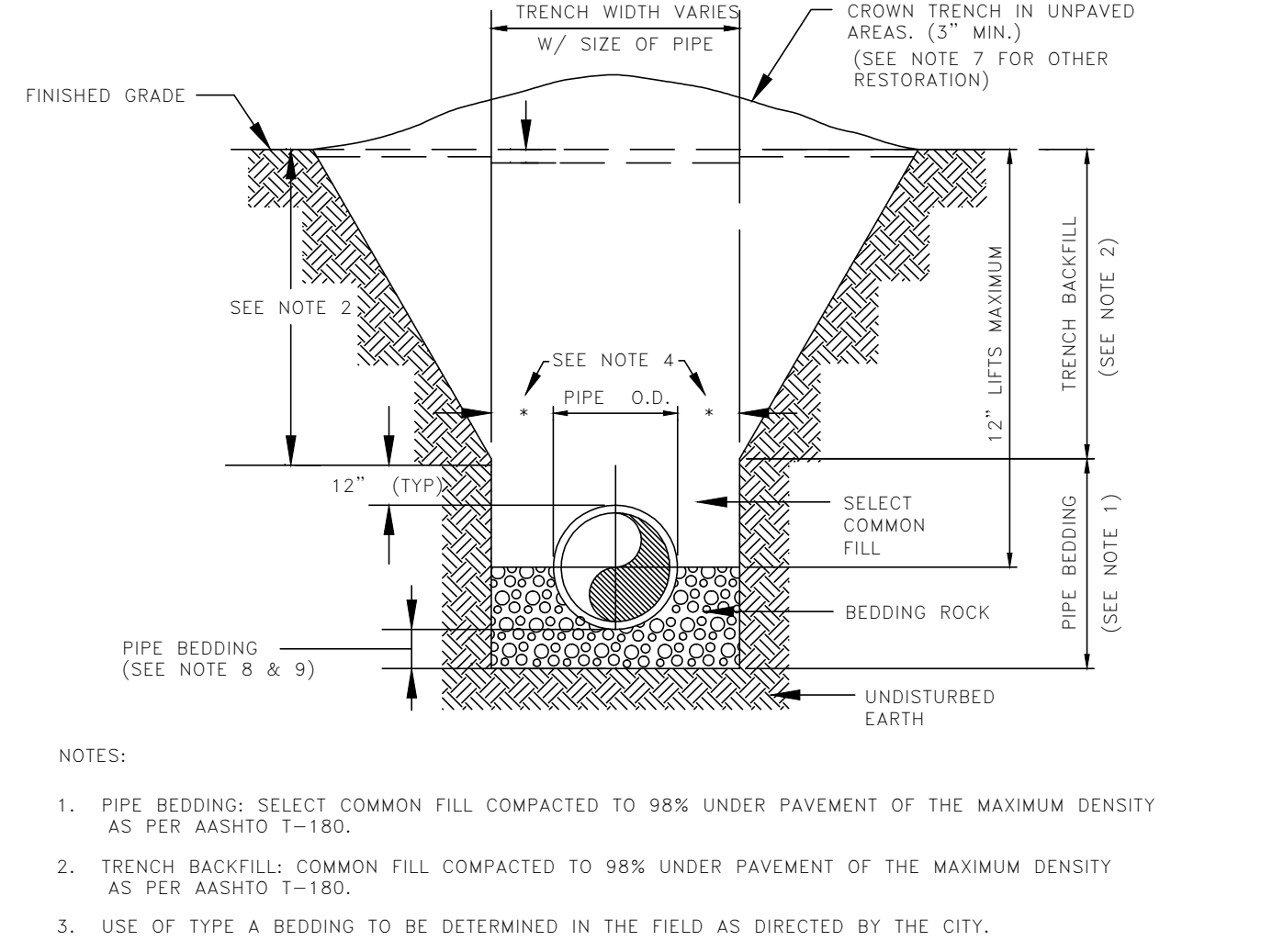
TEMPORARY JUMPER CONNECTION



NOTES:

1. PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 98% UNDER PAVEMENT OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 98% UNDER PAVEMENT OF THE MAXIMUM DENSITY AS TO AASHTO T-180.
3. PIPE BEDDING UTILIZING SELECT COMMON FILL OR BEDDING ROCK IN ACCORDANCE WITH TYPE A BEDDING AND TRENCHING DETAIL MAY BE REQUIRED AS DIRECTED BY THE CITY.
4. (*), 15" MAX. FOR PIPE DIAMETERS LESS THAN 24", AND 24" FOR PIPE DIAMETER 24" AND LARGER.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
7. GRAVITY SEWERS SHALL UTILIZE TYPE A BEDDING IF REQUIRED BY THE CITY. BEDDING DEPTH SHALL BE 4" MINIMUM FOR PIPE DIAMETER LESS THAN 15" AND 6" MINIMUM FOR PIPE DIAMETER 16" AND LARGER.
8. DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL GOVERN DEPTH OF BEDDING ROCK BELOW THE PIPE. THE CITY SHALL DETERMINE IN THE FIELD IF REMOVAL OF UNSUITABLE MATERIAL IS REQUIRED TO REACH A SUITABLE FOUNDATION.
9. ALL UNPAVED DISTURBED AREAS SHALL BE SODED TO MATCH ADJACENT DOMINANT GRASS SPECIES.
10. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF THE GOVERNING AGENCIES. SURFACE RESTORATION WITHIN CITY RIGHT-OF-WAY, SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS.

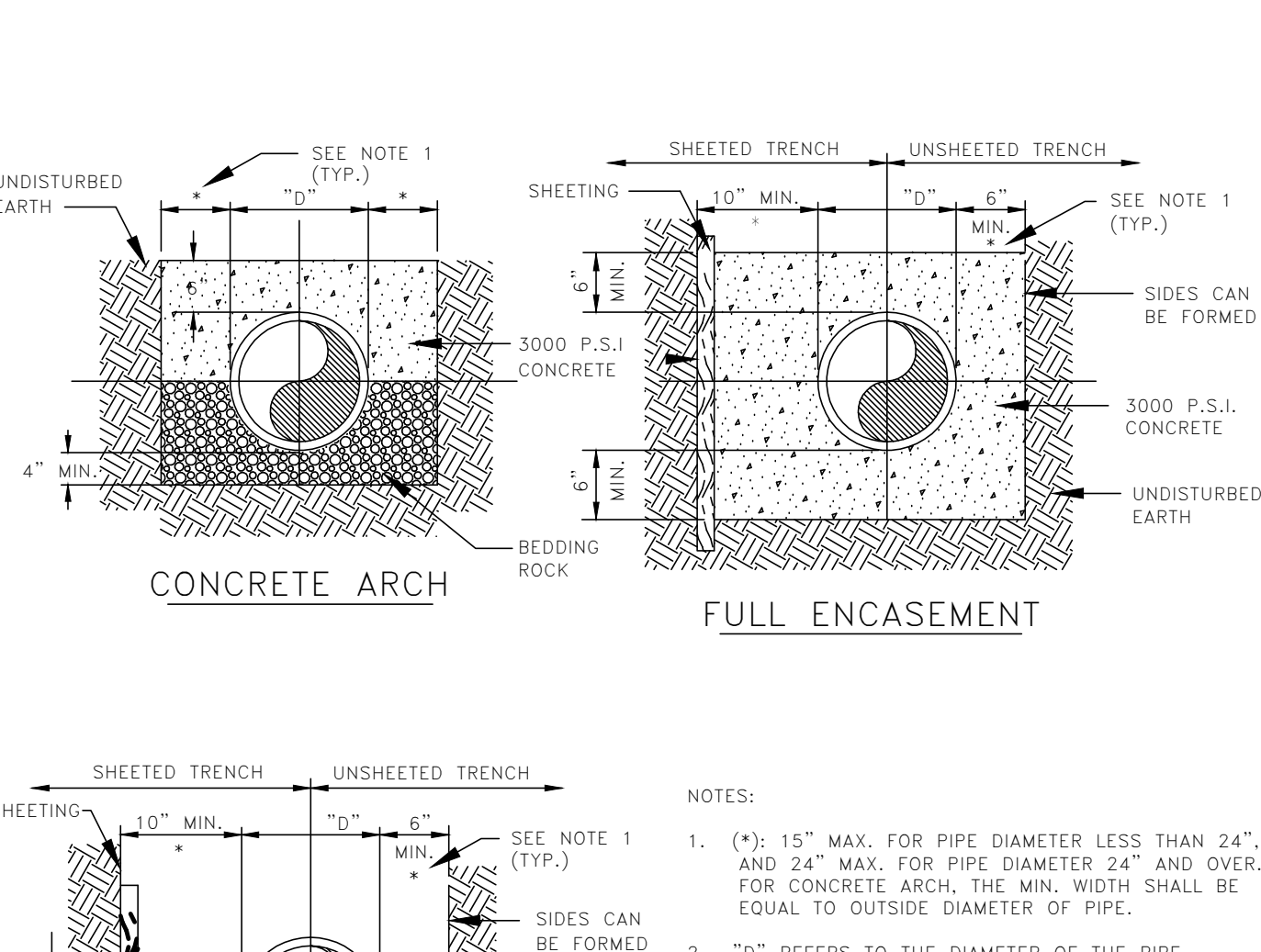
TYPE "B" BEDDING AND OPEN-CUT DETAIL



NOTES:

1. PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 98% UNDER PAVEMENT OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 98% UNDER PAVEMENT OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
3. USE OF TYPE A BEDDING TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CITY.
4. (*), 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND LARGER.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
7. GRAVITY SEWERS SHALL UTILIZE TYPE A BEDDING IF REQUIRED BY THE CITY. BEDDING DEPTH SHALL BE 4" MINIMUM FOR PIPE DIAMETER LESS THAN 15" AND 6" MINIMUM FOR PIPE DIAMETER 16" AND LARGER.
8. DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL GOVERN DEPTH OF BEDDING ROCK BELOW THE PIPE. THE CITY SHALL DETERMINE IN THE FIELD IF REMOVAL OF UNSUITABLE MATERIAL IS REQUIRED TO REACH A SUITABLE FOUNDATION.
9. ALL UNPAVED DISTURBED AREAS SHALL BE SODED TO MATCH ADJACENT DOMINANT GRASS SPECIES.
10. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF THE GOVERNING AGENCIES. SURFACE RESTORATION WITHIN CITY RIGHT-OF-WAY, SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS.

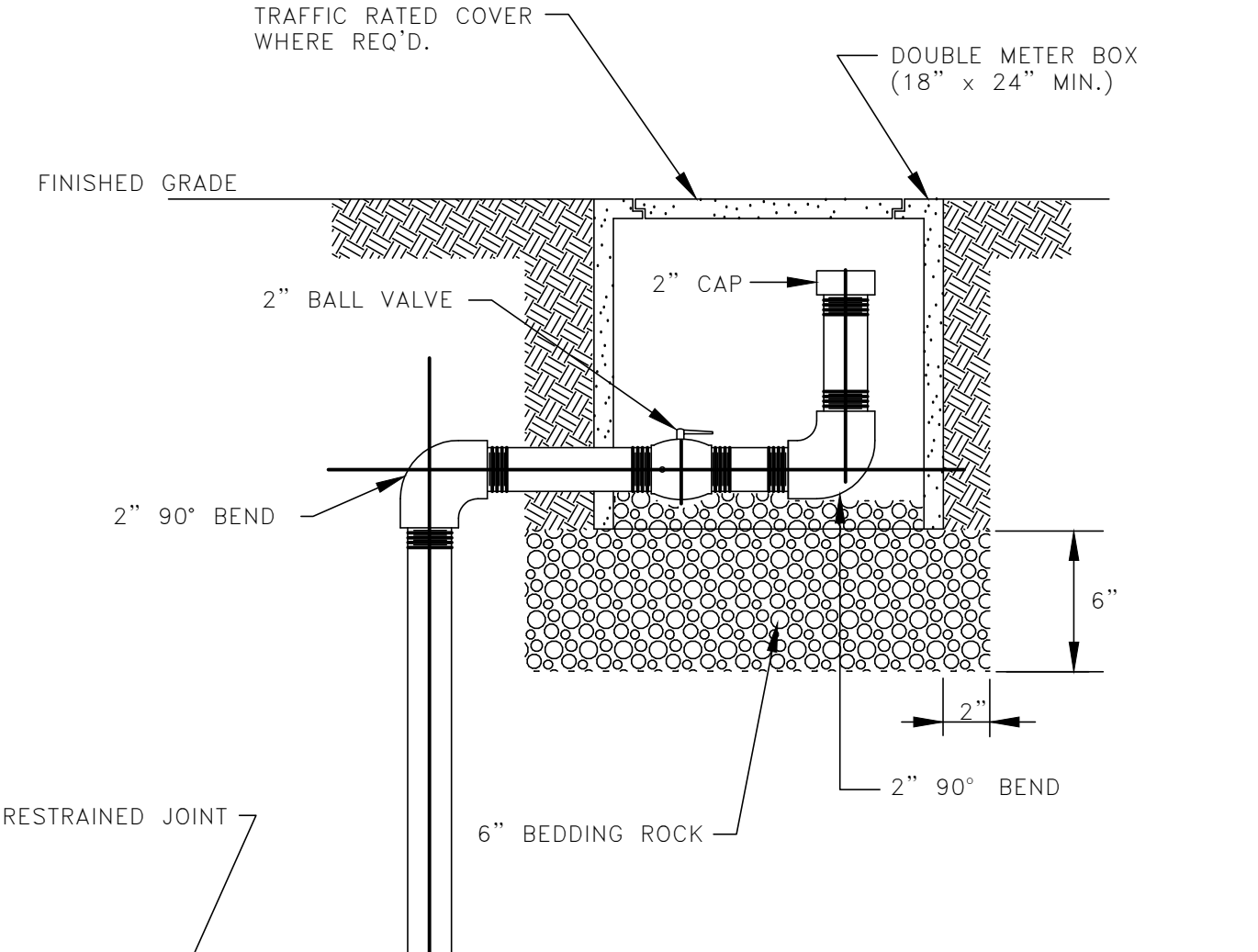
TYPE "A" BEDDING AND OPEN-CUT DETAIL



NOTES:

1. (*), 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND OVER. FOR CONCRETE ARCH, THE MIN. WIDTH SHALL BE EQUAL TO OUTSIDE DIAMETER OF PIPE.
2. "D" REFERS TO THE DIAMETER OF THE PIPE.
3. "T" REFERS TO THE THICKNESS OF THE PIPE.
4. THE NEED FOR CONCRETE ARCH HALF ENCASEMENT OR FULL ENCASEMENT TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CITY.
5. ENDS OF ENCASEMENT SHALL BE FORMED, AND LOCATIONS SHALL BE INDICATED ON RECORD DRAWINGS.

CONCRETE ARCH AND ENCASEMENT DETAILS



NOTES:

1. ALL 2 INCH PIPE AND FITTINGS SHALL BE SCHEDULE 40 GALVANIZED STEEL OR BRASS WITH THREADED (NPT) JOINTS. USE TEFLON TAPE ON JOINTS.
2. COLOR SHALL BE APPROPRIATE FOR USE.

BLOWOFF VALVE DETAIL

CITY OF APOPKA
DESIGN ENGINEERING DIVISION

JANUARY 2014

FIG. 504 A

CITY OF APOPKA
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JANUARY 2014

FIG. 100

CITY OF APOPKA
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JANUARY 2014

FIG. 101

CITY OF APOPKA
DESIGN ENGINEERING DIVISION

JANUARY 2014

FIG. 102

CITY OF APOPKA
DESIGN ENGINEERING DIVISION

JANUARY 2014

FIG. 403



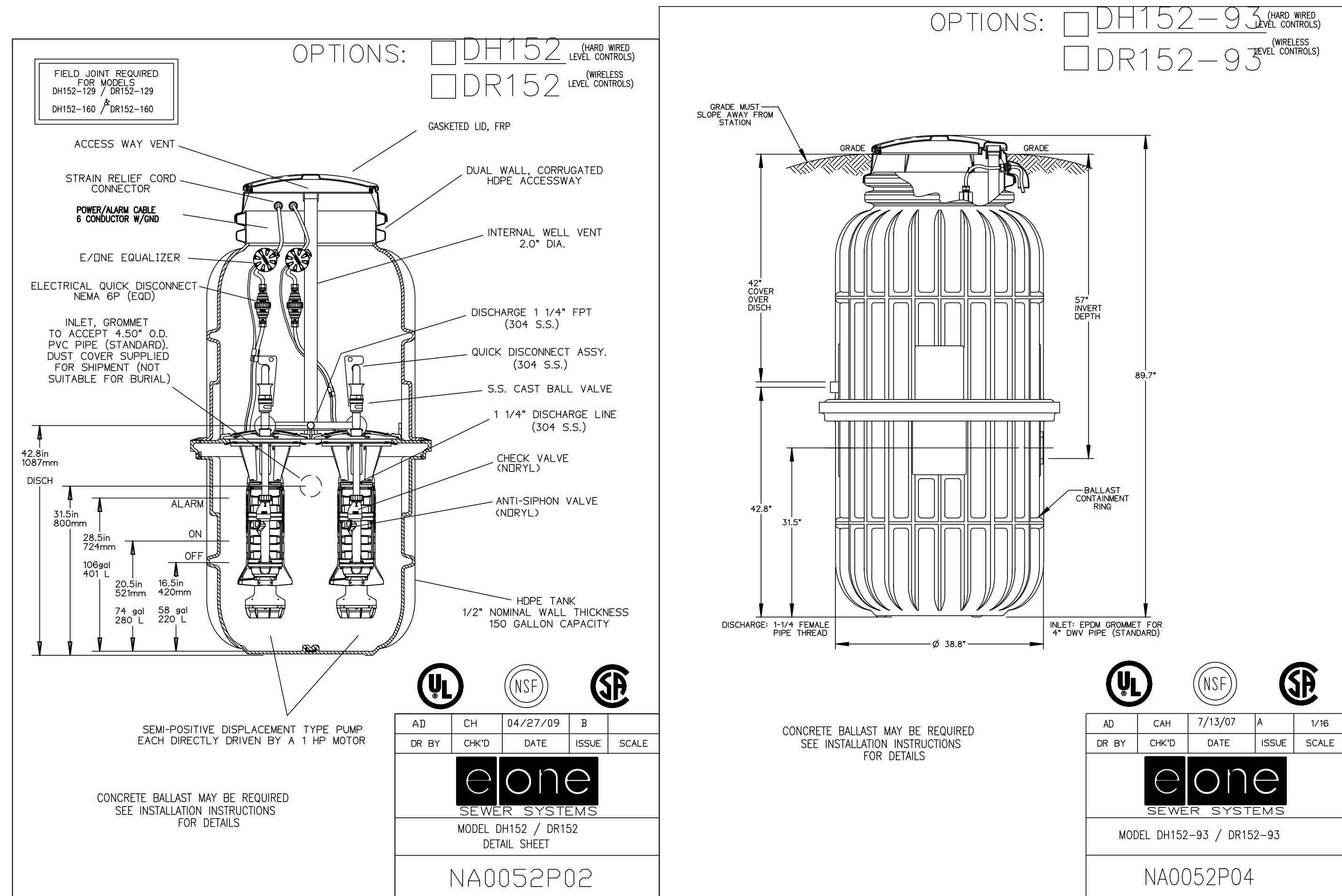
CITY OF APOPKA DETAIL SHEET
UTILITY EXTENSION
MAGNOLIA PARK ECO-TOURISM
OC CAPITAL PROJECTS
ORANGE COUNTY, FL

30% DESIGN DEVELOPMENT 2-28-18
60% CONSTRUCTION DOCS 10-22-18
100% PERMIT SET 10-31-18

Issue Date and Purpose
Project Number: 1733

Drawn by: D. FORSYTH
Checked: M. KALAGCHI
File No: C403

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SKConsortium, Inc.
1053 N. ORLANDO AVE., SUITE 300
MAITLAND, FLORIDA 32751
TELEPHONE: 407-629-4288 # FACSIMILE 407-629-7080



E-ONE NO. 1

| PUMP DATA | | ELEVATIONS | |
|---------------------------|-----------|-------------------|---------|
| PRIMARY PUMP CAPACITY | 14.25 GPM | TOP OF WETWELL | 87.5 |
| PRIMARY TDH | 5.75' TDH | LOW INLET INVERT | 85.0 |
| ELECTRICAL/ VOLTS / PHASE | 60/240/1 | HIGH LEVEL ALARM | 82.37 |
| PUMP DISCHARGE SIZE | 1 1/2" | 2nd PUMP ON | 81.7 |
| | | 1st PUMP ON | 81.7 |
| | | PUMPS OFF | 81.37 |
| | | BOTTOM OF WETWELL | 80.0 |
| | | WETWELL DIAMETER | 3.23 FT |

E-ONE NO. 2

| PUMP DATA | | ELEVATIONS | |
|---------------------------|-----------|-------------------|---------|
| PRIMARY PUMP CAPACITY | 11.75 GPM | TOP OF WETWELL | 78.5 |
| PRIMARY TDH | 32' TDH | LOW INLET INVERT | 75.8 |
| ELECTRICAL/ VOLTS / PHASE | 60/240/1 | HIGH LEVEL ALARM | 73.37 |
| PUMP DISCHARGE SIZE | 1 1/4" | 2nd PUMP ON | 72.7 |
| | | 1st PUMP ON | 72.7 |
| | | PUMPS OFF | 72.37 |
| | | BOTTOM OF WETWELL | 71.0 |
| | | WETWELL DIAMETER | 3.23 FT |

E-ONE NO. 3

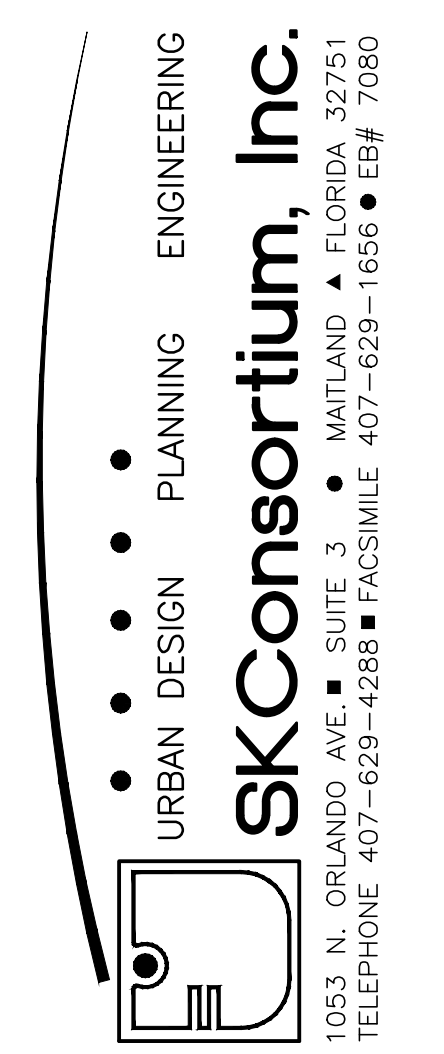
| PUMP DATA | | ELEVATIONS | |
|---------------------------|-----------|-------------------|---------|
| PRIMARY PUMP CAPACITY | 12.75 GPM | TOP OF WETWELL | 80.0 |
| PRIMARY TDH | 22' TDH | LOW INLET INVERT | 77.0 |
| ELECTRICAL/ VOLTS / PHASE | 60/240/1 | HIGH LEVEL ALARM | 74.37 |
| PUMP DISCHARGE SIZE | 1 1/4" | 2nd PUMP ON | 73.7 |
| | | 1st PUMP ON | 73.7 |
| | | PUMPS OFF | 73.37 |
| | | BOTTOM OF WETWELL | 72.0 |
| | | WETWELL DIAMETER | 3.23 FT |

GENERAL NOTES:

- DESIGN BASIS FOR PACKAGE LIFT STATION IS E-ONE.
- LIFT STATION WILL BE DESIGNED, FURNISHED AND INSTALLED BY E-ONE. BAFFLE AND CONCRETE BLAST WILL BE REQUIRED.
- CONTRACTOR MAY UTILIZE OTHER VENDORS WITH PRIOR APPROVAL FROM OC BY SUBMITTING MANUFACTURER DATA, AND SPECIFICATIONS.
- E-ONE MODEL NUMBER USED IS DH 152, WITH PROVISIONS FOR TWO PUMPS, 150 GALLON STORAGE WITH AVERAGE USE OF 3000 GPD.
- NORMAL OPERATIONS CONDITIONS FOR THE PUMPS ARE 11 GPM AT 40 PSI (17.4 FT.), 7.8 GPM @ 80 PSI (34 FT.).
- OPERATING CONDITIONS AS NOTED ABOVE.
- POWER SERVICE WILL BE 120V/240V, 60 HZ, SINGLE PHASE. POWER WILL BE PROVIDED FROM NEAREST BLDG, OR PANEL ON SITE.

ELECTRICAL SERVICE NOTES:

- CONTRACTOR SHALL EMPLOY A LICENSED ELECTRICAL CONTRACTOR AND BE RESPONSIBLE FOR NEW ELECTRICAL SERVICE TO THE PROPOSED LIFT STATIONS.
- CONTRACTOR SHALL COORDINATE WITH OWNER REPRESENTATIVE IN DETERMINING THE NEAREST SOURCE OF POWER TO THE LIFT STATION FROM NEAREST BLDG, OR ELEC. PANEL. ALL SERVICE WILL BE UG.



Seat: Majid Kaloghchi P.E. 41046



LIFT STATION DETAIL SHEET
 UTILITY EXTENSION
MAGNOLIA PARK ECO-TOURISM
 OC CAPITAL PROJECTS
 ORANGE COUNTY, FL

30% DESIGN DEVELOPMENT 2-28-18
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