

# MANATEE COUNTY UTILITIES DEPARTMENT

## LENA ROAD LANDFILL

### STORMWATER SYSTEM REVISIONS

### CONSTRUCTION DRAWINGS

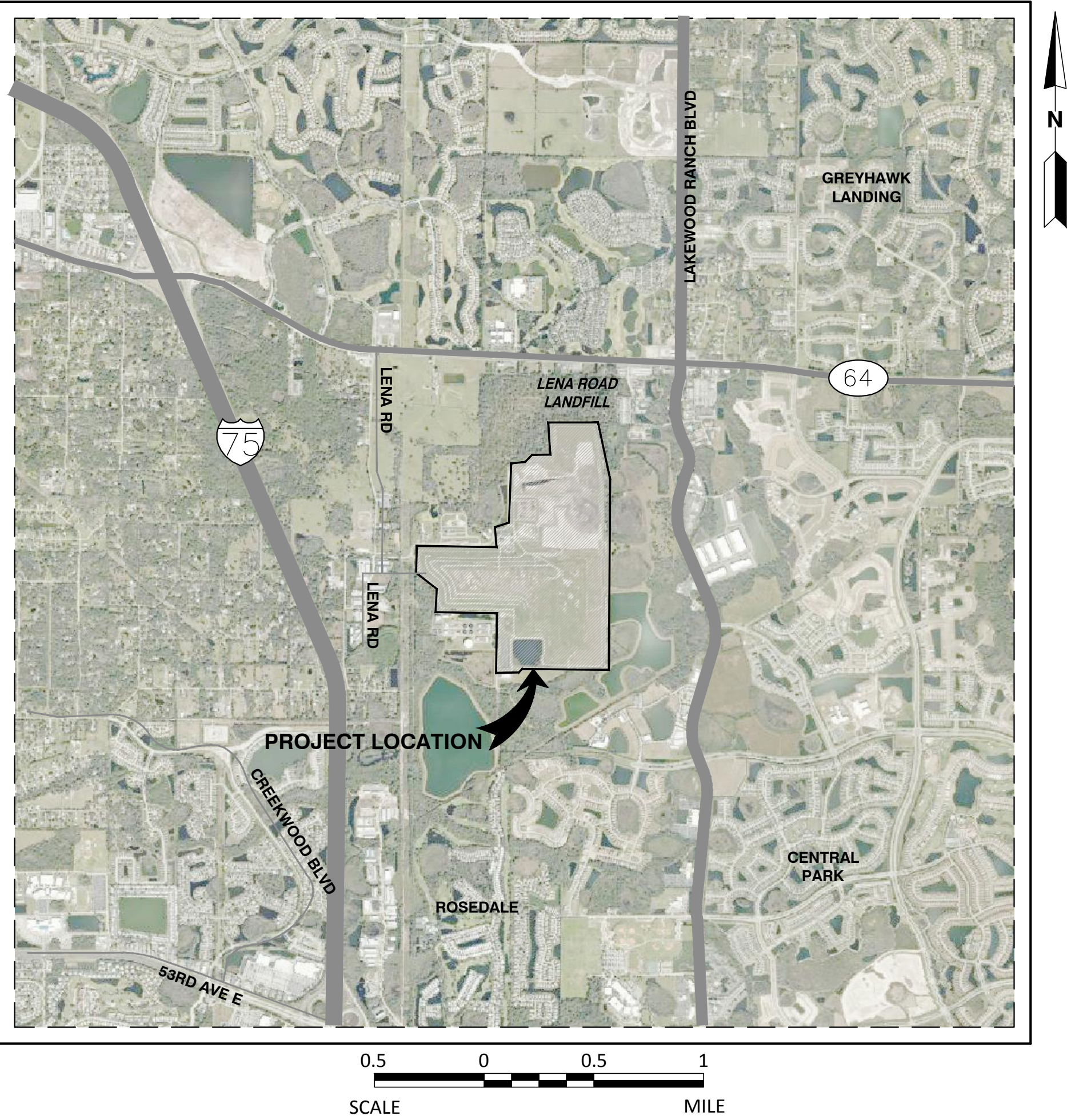
MANATEE COUNTY, FLORIDA

MAY 2020



#### MANATEE COUNTY BOARD OF COUNTY COMMISSIONERS

|                    |            |
|--------------------|------------|
| PRISCILLA TRACE    | DISTRICT 1 |
| REGGIE BELLAMY     | DISTRICT 2 |
| STEPHEN R. JONSSON | DISTRICT 3 |
| MISTY SERVIA       | DISTRICT 4 |
| VANESSA BAUGH      | DISTRICT 5 |
| CAROL WHITMORE     | AT LARGE   |
| BETSY BENAC        | AT LARGE   |



LOCATION MAP

#### SCS ENGINEERS

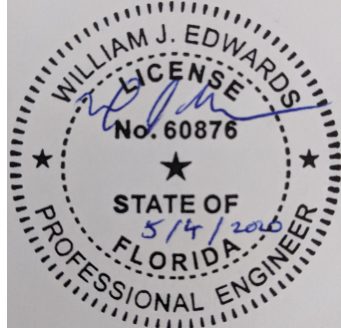
STEARNS, CONRAD AND SCHMIDT  
CONSULTING ENGINEERS, INC.  
3922 COCONUT PALM DRIVE, SUITE 102  
TAMPA, FL 33619  
PH. (813) 621-0080 FAX. (813) 623-6757  
FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004892  
WWW.SCSENGINEERS.COM  
SCS PROJECT NO. 09217088.16

| INDEX OF DRAWINGS |  |
|-------------------|--|
| SHEET NO.         | SHEET TITLE                            |
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Always call 811 two full business days before you dig



WHEN DRAWINGS ARE REDUCED IN SIZE FROM  
ORIGINAL 24" X 36", SCALING WILL NOT BE ACCURATE.



WILLIAM J. EDWARDS, P.E.  
LICENSE NO. 60876

## GENERAL NOTES AND SYMBOLS

**APPLICABLE CODES:**

1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE MANATEE COUNTY PUBLIC WORKS DEPARTMENT, MANATEE COUNTY PUBLIC UTILITIES DEPARTMENT, MANATEE COUNTY PLANNING AND DEVELOPMENT SERVICES DEPARTMENT, FLORIDA DEPARTMENT OF TRANSPORTATION AND ALL OTHER APPLICABLE LOCAL, STATE AND FEDERAL CODES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION IS DONE IN A SAFE MANNER AND IN STRICT COMPLIANCE WITH ALL THE REQUIREMENTS OF THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 OR LATEST EDITION, AND ALL STATE AND LOCAL SAFETY AND HEALTH REGULATIONS.
3. ALL ELEVATIONS SHOWN ON THE CONSTRUCTION DRAWINGS ARE BASED ON THE NORTH ATLANTIC VERTICAL DATUM (N.A.V.D.) OF 1988, UNLESS OTHERWISE NOTED.
4. CENTERLINE GEOMETRY AND DIMENSIONS SHOWN ON THESE PLANS ARE INTENDED FOR LOCATING HIGH AND LOW POINTS AND ARE NOT TO BE USED FOR SITE LAYOUT. FINAL SITE LAYOUT SHALL BE DONE IN ACCORDANCE WITH THE APPROVED PLANS.
5. EXISTING TOPOGRAPHIC AND SURVEY INFORMATION SHOWN ARE BASED ON A PHOTOGRAMMETRIC SURVEY PREPARED BY PICKETT AND ASSOCIATES, INC., 475 SOUTH FIRST AVENUE, BARTOW, FLORIDA 33830, DATED FEBRUARY 2019 .

**PRECONSTRUCTION RESPONSIBILITIES:**

1. THE INFORMATION PROVIDED IN THESE PLANS IS TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF THE WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT ANY INVESTIGATIONS THEY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AND UPON WHICH THEIR BIDS WILL BE BASED.
2. UPON THE RECEIPT OF THE "NOTICE TO PROCEED", THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD AND/OR MANATEE COUNTY LANDFILL REPRESENTATIVE AND ARRANGE A PRE-CONSTRUCTION CONFERENCE TO INCLUDE ALL INVOLVED GOVERNMENTAL AGENCIES, UTILITY OWNERS AND THE OWNER.
3. THE CONTRACTOR SHALL CONTACT "SUNSHINE ONE-CALL OF FLORIDA" BY CALLING 811 AT LEAST 48 HOURS PRIOR TO COMMENCING ANY EXCAVATION OR CONSTRUCTION IN ORDER TO PROVIDE FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
4. EXISTING UTILITIES SHALL BE MAINTAINED IN SERVICE DURING CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE UTILITY OWNER. ALL EXISTING UTILITIES ARE TO REMAIN UNLESS OTHERWISE NOTED.
5. THE CONTRACTOR SHALL COORDINATE WITH UTILITY OWNERS TO ARRANGE RELOCATION AND TEMPORARY SUPPORT OF UTILITY FEATURES, ETC. AS NECESSARY TO COMPLETE THE WORK. THIS INCLUDES BUT NOT LIMITED TO EXISTING STORM SEWER, SANITARY SEWER, WATER MAINS, FORCEMAINS, GAS MAINS, ELECTRICAL, CABLE AND TELEPHONE UTILITIES.
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ANY AND ALL EXISTING UTILITIES ON THIS PROJECT.
7. THE LOCATION(S) OF THE UTILITIES SHOWN IN THE PLANS SHALL BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHER IMPROVEMENTS CONSTRUCTED AFTER THE PREPARATION OF THESE PLANS AND THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE FACILITIES SHOWN OR ANY OTHER FACILITIES NOT SHOWN. THE CONTRACTOR SHALL FIELD VERIFY AND LOCATE (LINE & GRADE) ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITIES BY ELECTRONIC METHODS AND BY HAND EXCAVATION IN COORDINATION WITH ALL UTILITY COMPANIES PRIOR TO COMMENCING ANY CONSTRUCTION OPERATION. UNLESS OTHERWISE ALLOWED BY THE OWNER, THIS WORK BY THE CONTRACTOR SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AT NO ADDITIONAL COST TO THE PROJECT.
8. IF, UPON EXCAVATION, EXISTING CONDITIONS ARE FOUND TO BE IN CONFLICT WITH THE PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF RECORD AND/OR MANATEE COUNTY LANDFILL REPRESENTATIVE SO THAT APPROPRIATE MEASURES CAN BE TAKEN TO RESOLVE THE PROBLEM.
9. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERTICALLY AND HORIZONTALLY PROTECT ANY AND ALL EXISTING UTILITIES ON THIS PROJECT. ANY DAMAGE TO SUCH UTILITIES SHOWN OR NOT SHOWN ON THE PLANS SHALL BE IMMEDIATELY REPAIRED TO THE UTILITY OWNER'S SATISFACTION AT NO ADDITIONAL COST TO THE PROJECT. THE OWNER RESERVES THE RIGHT TO REMEDY SUCH DAMAGE BY ORDERING OUTSIDE PARTIES TO MAKE SUCH REPAIRS AT THE EXPENSE TO THE CONTRACTOR.
10. TWO WEEKS PRIOR TO INITIATING WORK, THE CONTRACTOR WILL SUBMIT FOR APPROVAL A SCHEDULE TO THE ENGINEER FOR COMPLETION OF THE PROJECT.

### EROSION AND SEDIMENT CONTROL:

1. ALL PRACTICABLE AND NECESSARY EFFORT SHALL BE TAKEN DURING CONSTRUCTION TO CONTROL AND PREVENT EROSION AND TRANSPORT OF SEDIMENT MATERIAL TO INLETS, SURFACE DRAINS, WETLANDS AND DETENTION AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RESTORATION EFFORTS THAT MAY BE REQUIRED.
2. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND AIR AND WATER POLLUTION WILL BE MINIMIZED. STATE AND LOCAL LAWS SHALL BE COMPLIED WITH AT ALL TIMES.
3. PROVIDE ALL DISTURBED AREAS WITHIN THE LIMITS OF THE WORK WITH TEMPORARY SOIL EROSION CONTROL AND SEDIMENT CONTROL, UTILIZING EARTH DAMS & PONDS, GRADE TO DRAIN SWALES, SETTLING BASINS, SILT FENCES, STONE FILTERS, HAY BALE FILTERS, ETC., TREATING ALL SOIL SURFACES WITH SEEDED TOPSOIL AND/OR SOD AFTER GRADING. SEE GENERAL NOTES NO. 15.
4. EROSION AND SEDIMENT CONTROL WILL BE INSTALLED PRIOR TO CONSTRUCTION, AS NECESSARY, TO PREVENT SEDIMENTATION AND DAMAGE TO ADJACENT AREAS AS TAKEN BY THE COUNTY'S REPRESENTATIVE AND SHALL BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
5. CONTRACTOR WILL INSPECT AND REPAIR, AS NECESSARY, ANY EROSION AND SEDIMENT CONTROL DAILY AND FOLLOWING EACH RAIN.
6. CONTRACTOR IS RESPONSIBLE FOR MONITORING DOWNSTREAM CONDITIONS THROUGHOUT THE CONSTRUCTION PERIOD AND CLEARING ANY DEBRIS AND SEDIMENT RESULTING FROM CONSTRUCTION.
7. CONTRACTOR SHALL ENSURE THE MINIMUM AMOUNT OF BARE SOIL EXPOSED AT ONE TIME AND INSTALL SOIL EROSION CONTROL FENCES AS SHOWN AND IN SUCH A MANNER AS TO CAPTURE AND FILTER SURFACE WATER DURING CONSTRUCTION.
8. EROSION CONTROL FENCING MUST MEET THE REQUIREMENT OF THE DEPARTMENT OF TRANSPORTATION, STATE OF FLORIDA STANDARD SPECIFICATIONS. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES.
9. ALL DISTURBED AREAS WITHIN THE LIMITS OF CONSTRUCTION SHALL RECEIVE VEGETATIVE TREATMENT AFTER FINAL GRADING IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. DISTURBED AREAS NOT SPECIFICALLY DESIGNATED WITH A VEGETATIVE COVER SHALL BE SODDED UNLESS OTHERWISE DIRECTED. SEE GENERAL NOTES NO. 14.

**EARTHWORK:**

1. SURVEY BENCHMARKS, MONUMENTS AND OTHER REFERENCE POINTS SHALL BE PROTECTED FROM DAMAGE AND DISPLACEMENT IF DISTURBED OR DESTROYED, THEY WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
2. CONTRACTOR SHALL KEEP DIRT, DUST, NOISE AND OTHER OBJECTIONABLE NUISANCES TO A MINIMUM.

### INSPECTION AND TESTING:

1. THE CONTRACTOR SHALL NOTIFY THE OWNER/ENGINEER OF RECORD AS WELL AS ANY OTHER GOVERNMENTAL AGENCIES HAVING JURISDICTION AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
2. THE CONTRACTOR SHALL GIVE THE ENGINEER OF RECORD AND/OR MANATEE COUNTY REPRESENTATIVE AT LEAST 48 HOURS ADVANCE NOTICE OF, AND THE ENGINEER OF RECORD AND/OR MANATEE COUNTY REPRESENTATIVE MUST BE PRESENT TO WITNESS, THE FOLLOWING:
  - A. INSTALL EROSION AND SEDIMENTATION CONTROL MEASURES.
  - B. CONSTRUCTION OF STORMWATER MODIFICATIONS.
  - C. SUBSTANTIAL COMPLETION.
  - D. FINAL INSPECTION OF GRADING AND DRAINAGE.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ALL APPLICABLE REGULATORY AGENCIES FOR INSPECTION REQUIREMENTS.

**TEMPORARY FACILITIES:**

1. TEMPORARY FACILITIES:
  - A. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE FOR OR SUPPLY TEMPORARY WATER SERVICE, SANITARY FACILITIES, AND ELECTRICITY, DURING CONSTRUCTION.
  - B. THE CONTRACTOR SHALL MAINTAIN A CLEAR PATH FOR ALL SURFACE WATER DRAINAGE STRUCTURES AND DITCHES DURING ALL PHASES OF CONSTRUCTION, IF APPLICABLE.
2. TRAFFIC REGULATION:
  - A. THE CONTRACTOR SHALL PROVIDE ALL WARNING SIGNALS, SIGNS, LIGHTS AND FLAGPERSONS AS NECESSARY FOR THE MAINTENANCE OF TRAFFIC WITHIN PUBLIC RIGHT-OF-WAYS IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.), FLORIDA DEPT. OF TRANSPORTATION AND THE MANATEE COUNTY PUBLIC WORKS DEPARTMENT.
  - B. ALL OPEN TRENCHES AND HOLES ADJACENT TO ROADWAYS OR WALKWAYS SHALL BE PROPERLY MARKED AND BARRICADED TO ASSURE THE SAFETY OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC.
  - C. NO TRENCHES OR HOLES NEAR WALKWAYS, IN ROADWAYS OR THEIR SHOULDERS ARE TO BE LEFT OPEN DURING NIGHTTIME HOURS WITHOUT EXPRESS PERMISSION OF THE MANATEE COUNTY PUBLIC WORKS DEPARTMENT AND/OR MANATEE COUNTY SOLID WASTE DIVISION.

**PROJECT CLOSEOUT:**

1. **CLEANING UP:**
- A. DURING CONSTRUCTION, THE PROJECT SITE AND ALL ADJACENT AREAS SHALL BE MAINTAINED IN A NEAT AND CLEAN MANNER, AND UPON FINAL CLEAN-UP, THE PROJECT SITE SHALL BE LEFT CLEAR OF ALL SURPLUS MATERIAL OR TRASH. THE PAVED AREAS SHALL BE SWEEPED BROOM CLEAN.
  - B. THE CONTRACTOR SHALL RESTORE OR REPLACE, WHEN AND AS DIRECTED, ANY PUBLIC OR PRIVATE PROPERTY DAMAGED BY HIS WORK, EQUIPMENT AND/OR EMPLOYEES TO A CONDITION AT LEAST EQUAL TO THAT EXISTING IMMEDIATELY PRIOR TO THE BEGINNING OF OPERATIONS, AT NO ADDITIONAL COST TO THE OWNER.
  - C. THE CONTRACTOR SHALL REPLACE ALL PAVING, STABILIZED EARTH, CURBS, ROADWAYS, SIDEWALKS, SIGNS AND ANY OTHER IMPROVEMENTS REMOVED DURING CONSTRUCTION WITH THE SAME TYPE OF MATERIAL AND TO THE CONDITION WHICH EXISTED PRIOR TO THE BEGINNING OF OPERATIONS.
  - D. WHERE MATERIAL OR DEBRIS HAVE WASHED OR FLOWED INTO, OR HAVE BEEN PLACED IN WATER COURSES, DITCHES, DRAINS, CATCH BASINS, OR ELSEWHERE AS A RESULT OF THE CONTRACTOR'S OPERATIONS, SUCH MATERIAL OR DEBRIS SHALL BE REMOVED AND SATISFACTORILY DISPOSED OF DURING THE PROGRESS OF THE WORK, AND THE AREA KEPT IN A CLEAN AND NEAT CONDITION.
2. ALL PROPERTY MONUMENTS OR PERMANENT REFERENCES, REMOVED OR DESTROYED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE RESTORED BY A STATE OF FLORIDA REGISTERED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.
3. **PROJECT RECORD DOCUMENTS:**

**STORM DRAINAGE:**

GENERAL:

1. THE CONTRACTOR SHALL COMPLY WITH FDEP NPDES REQUIREMENTS FOR STORMWATER DISCHARGE FROM CONSTRUCTION ACTIVITIES (CGP). THE CONTRACTOR SHALL FILE A CGP NOTICE OF INTENT (NOI) AND PROVIDE CONFIRMATION OF COVERAGE UNDER THE FDEP NPDES CGP TO MANATEE COUNTY SOLID WASTE DIVISION. THE CONTRACTOR SHALL IMPLEMENT EROSION AND SEDIMENT CONTROL BMP'S IN ACCORDANCE WITH THE GENERAL AND SPECIAL CONDITIONS OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR THIS PROJECT AS ACCEPTED, MAINTAINED AND MODIFIED AS NECESSARY BY THE CONTRACTOR.

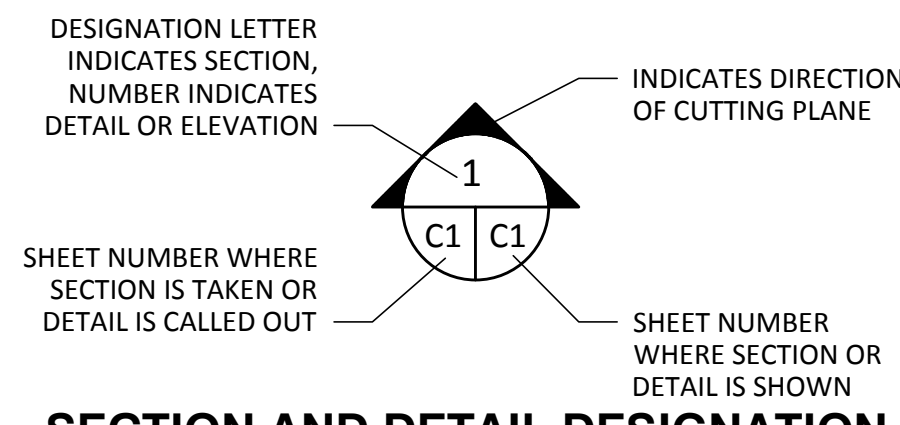
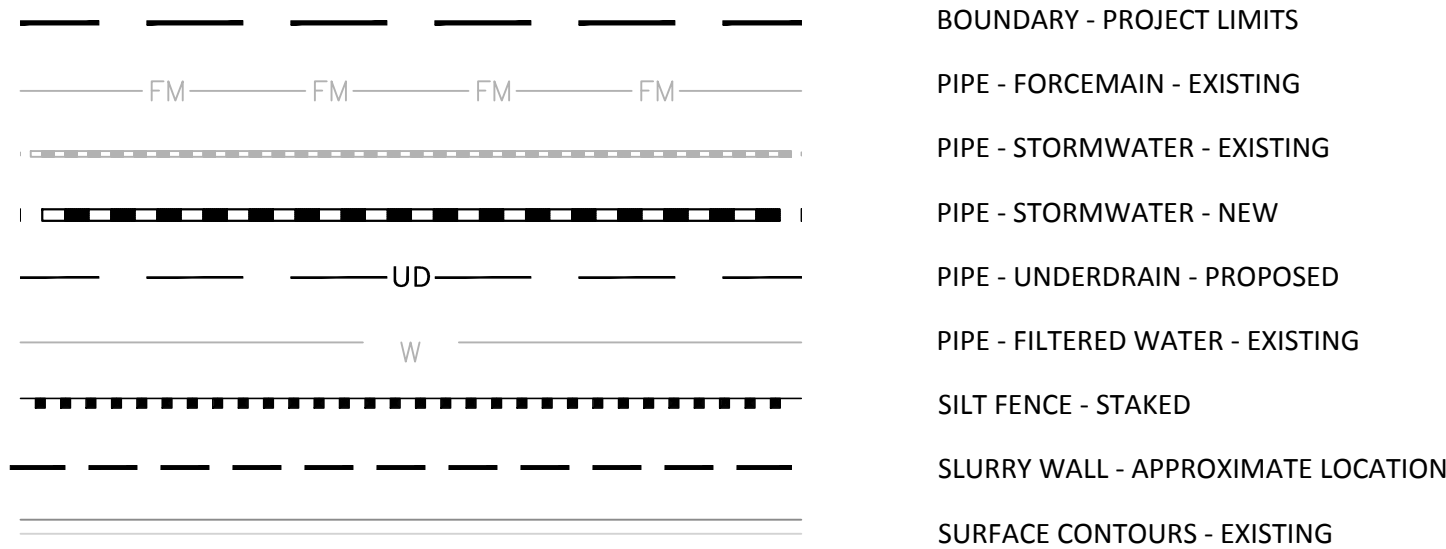
**ABBREVIATIONS:**

|      |                           |
|------|---------------------------|
| FM   | FORCEMAIN                 |
| HDPE | HIGH DENSITY POLYETHYLENE |
| INV  | INVERT ELEVATION          |
| MES  | MITERED END SECTION       |
| PVC  | POLYVINYL CHLORIDE        |
| RCP  | REINFORCED CONCRETE PIPE  |
| RJ   | REINFORCED JOINT          |

**GENERAL NOTES:**

1. THE CONTRACTOR IS ADVISED THAT NO ACTIVITIES MAY INTERFERE, DISRUPT, BLOCK, OR OTHERWISE CONFLICT WITH LANDFILL OPERATIONS. IF CONFLICTS ARE ANTICIPATED THEY SHALL BE COORDINATED AND APPROVED BY THE COUNTY AND ENGINEER PRIOR TO DISRUPTION.
2. PROJECT SITE IS ADJACENT TO AN ACTIVE SOLID WASTE LANDFILL (ON SITE). CONSTRUCTION MUST COORDINATE WORK WITH THE OWNER (MANATEE COUNTY) TO ENSURE NO INTERRUPTION OF LANDFILL OPERATIONS.
3. ANY AND ALL FINES IMPOSED ON THE COUNTY BY ANY REGULATORY AGENCY DUE TO ACTION OF THE CONTRACTOR SHALL BE PAID BY THE CONTRACTOR.
4. INSPECTION: EXAMINE AREAS FOR CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED. REPORT IN WRITING TO COUNTY'S REPRESENTATIVE ALL CONDITIONS CONTRARY TO THOSE SHOWN ON THE DRAWINGS OR SPECIFIED HEREIN AND ALL OTHER CONDITIONS THAT WILL AFFECT SATISFACTORY EXECUTION OF WORK. DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED. STARTING WORK CONSTITUTES ACCEPTANCE OF THE CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED. AFTER SUCH ACCEPTANCE, THE CONTRACTOR SHALL AT CONTRACTORS EXPENSE BE RESPONSIBLE FOR CORRECTING ALL UNSATISFACTORY AND DEFECTIVE WORK RESULTING FROM SUCH UNSATISFACTORY CONDITIONS.
5. ALL WORK SHALL BE PERFORMED IN A QUALITY WORKMANLIKE MANNER.
6. DEVIATIONS FROM THESE PLANS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN CONSENT OF THE ENGINEER OR COUNTY MAY CAUSE THE WORK TO BE UNACCEPTABLE AND WILL BE ADJUSTED OR REPAIRED AT THE CONTRACTOR'S EXPENSE.
7. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY LICENSES AND PERMITS ASSOCIATED WITH THE CONSTRUCTION OF THIS PROJECT UNLESS NOTIFIED OTHERWISE IN WRITING BY THE OWNER.
8. THE WORK SHALL HAVE A ONE YEAR WARRANTY. ONE YEAR WARRANTY WILL BECOME EFFECTIVE WHEN THE PROJECT IS SUBSTANTIALLY COMPLETE, AS DETERMINED BY THE ENGINEER IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
9. ACTUAL DIMENSIONS AND LOCATIONS MAY VARY BASED ON FIELD LOCATIONS
10. TERMS "COUNTY'S REPRESENTATIVE" AND "ENGINEER" ARE INTERCHANGEABLE.
11. THE DISPOSAL OF ALL DEBRIS RESULTING FROM CONSTRUCTION ACTIVITIES AND EXCESS EARTHWORK MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. DISPOSAL OF WASTE IN THE ACTIVE LANDFILL CELL IS AT THE DISCRETION OF THE COUNTY AND IF ACCEPTED, SHALL BE WEIGHED AT THE COUNTY SCALE/HOUSE PRIOR TO DISPOSAL UNLESS WAIVED BY THE COUNTY. ALL EXCESS MATERIAL IS THE PROPERTY OF THE COUNTY.
12. THE CONSTRUCTION LENGTHS INDICATED IN THESE PLANS ARE APPROXIMATE. ACTUAL LIMITS MAY BE SET IN THE FIELD AS DIRECTED BY THE ENGINEER.
13. ALL WORK PERFORMED SHALL COMPLY WITH ALL APPLICABLE REGULATIONS AND ORDINANCES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PENALTIES/FINES LEVIED DUE TO WORK THAT IS NOT IN ACCORDANCE WITH PERMIT CONDITIONS.
14. ALL AREAS OF EXPOSED EARTH RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE SODDED OR SEEDED AS PER PROJECT SPECIFICATIONS, UNLESS OTHERWISE NOTED ON PLANS. ALL AREAS OF DISTURBED EARTH ON SIDE SLOPES SHALL BE SODDED ACCORDING TO PROJECT SPECIFICATIONS.
15. PROTECT BY WHATEVER MEANS REQUIRED ALL FENCES, SIGNS, STRUCTURES, DRIVES, SIDEWALKS, STREETS, BUSHES, TREES, ETC. WHICH ARE NOT DESIGNATED FOR REMOVAL, OR ARE OUTSIDE THE LIMITS OF CONSTRUCTION.
16. ALL DEBRIS INCLUDING BLOWN DEBRIS SHOULD BE CONTROLLED BY CONTRACTOR AND CLEANED-UP DAILY.
17. ALL TRENCH EXCAVATIONS SHALL BE BACKFILLED TO PRE-EXISTING GRADE EACH DAY UNLESS OTHERWISE APPROVED BY COUNTY.

### LEGEND



### SECTION AND DETAIL DESIGNATION



F:\PROJECT\09217088\16\Drawings\Engineering Drawings\Revisions (May 2020)\Sheet 3 - Site Aerial.dwg May 04, 2020 - 11:50am Layout Name: Layout1 By: 4382kkc



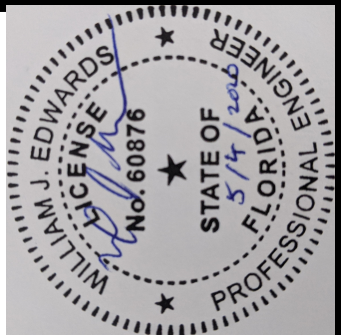
NOTES:  
IMAGE - 2019 MICROSOFT/DIGITAL GLOBE/BING VIA  
AUTODESK STREAMING AERIAL IMAGE SERVICE.

**LEGEND**

--- BOUNDARY - PROJECT LIMITS

- - - SLURRY WALL - APPROXIMATE LOCATION

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| SCS ENGINEERS<br>STEARN, CONRAD AND SCHMIDT<br>CONSULTING ENGINEERS<br>3922 COCONUT PALM DRIVE, SUITE 102, TAMPA, FL 33619<br>PH (813) 621-0080 FAX NO. (813) 623-6757<br>FLORIDA FIRM REGISTRATION RY-4892 |                 | MANATEE COUNTY UTILITIES<br>DEPARTMENT<br>4410 66TH STREET WEST<br>BRADENTON, FLORIDA 34210 |                | SHEET TITLE<br>SITE PLAN WITH AERIAL<br>PHOTOGRAPH                 |  | CHK<br>BY        |  | DESCRIPTION     |  | DATE |  | REV |  |
| PROJ. NO.<br>09217088.16  | DRAWN BY<br>KCC | CHECKED BY<br>WJE   | APP. BY<br>SRF | PROJECT TITLE<br>LENA ROAD LANDFILL<br>STORMWATER SYSTEM REVISIONS |  |                  |  |                 |  |      |  |     |  |
| CADD FILE:<br>SHEET 3 - SITE AERIAL   |                 | DATE:<br>MAY 2020   |                | SCALE:<br>AS SHOWN   |  | DRAWING NO.<br>3 |  | SHEET<br>3 of 8 |  |      |  |     |  |



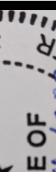
F:\PROJECT\09217088.16\Drawings\Engineering Drawings\Revisions (May 2020)\Sheet 4 - Project Area.dwg    May 04, 2020    - 11:53am Layout Name: PROJECT AREA By: 4382kcc



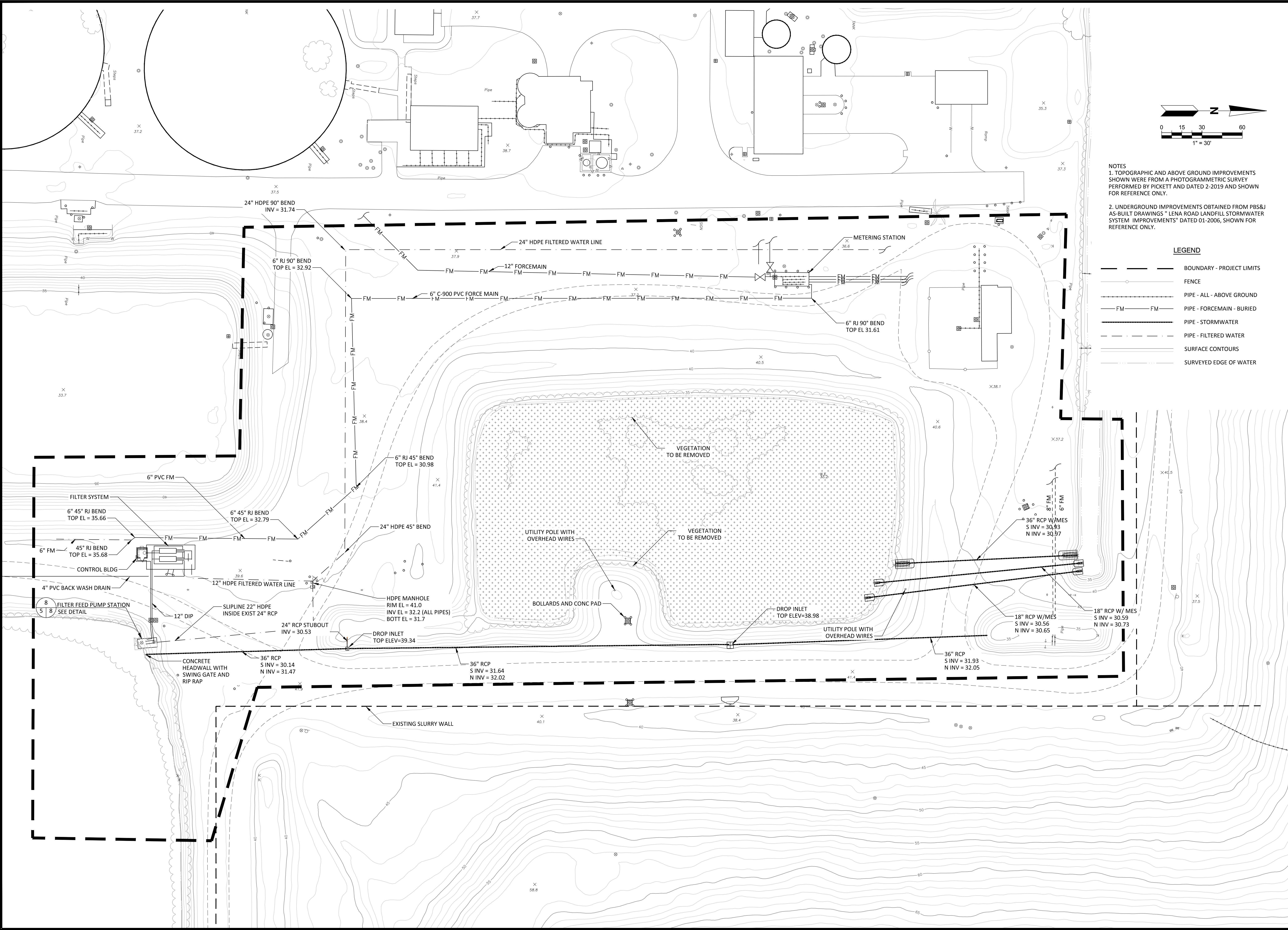
- NOTES
1. TOPOGRAPHIC AND ABOVE GROUND IMPROVEMENTS SHOWN WERE FROM A PHOTOGRAMMETRIC SURVEY PERFORMED BY PICKETT AND DATED 2-2019 AND SHOWN FOR REFERENCE ONLY.
  2. UNDERGROUND IMPROVEMENTS OBTAINED FROM PBS&J AS-BUILT DRAWINGS " LENA ROAD LANDFILL STORMWATER SYSTEM IMPROVEMENTS" DATED 01-2006, SHOWN FOR REFERENCE ONLY.
  3. IMAGE - 2019 MICROSOFT/DIGITAL GLOBE/BING VIA AUTODESK STREAMING AERIAL IMAGE SERVICE.

LEGEND

--- BOUNDARY - PROJECT LIMITS

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| SCS ENGINEERS<br>STEARNS, CONRAD AND SCHMIDT<br>CONSULTING ENGINEERS<br>3922 COCONUT PALM DRIVE, SUITE 102, TAMPA, FL 33619<br>PH (813) 621-0080 FAX NO. (813) 623-6757<br>FLORIDA FIRM REGISTRATION RY-4892 |  | MANATEE COUNTY UTILITIES<br>DEPARTMENT<br>4410 66TH STREET WEST<br>BRADENTON, FLORIDA 34210 |  | PROJECT AREA WITH AERIAL<br>LENA ROAD LANDFILL<br>STORMWATER SYSTEM REVISIONS |  |  |  |
| CADD FILE:<br>SHEET 4 - PROJECT AREA   |  | CLIENT  |  | SHEET TITLE   |  | CHK. BY  |  |
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F:\PROJECT\09217088.16\Drawings\Engineering Drawings\Revisions (May 2020)\Sheet 5-6 - Existing and Proposed Conditions.dwg May 04, 2020 - 11:56am Layout Name: EXISTING By: 43824kc



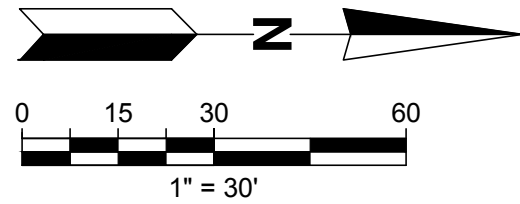
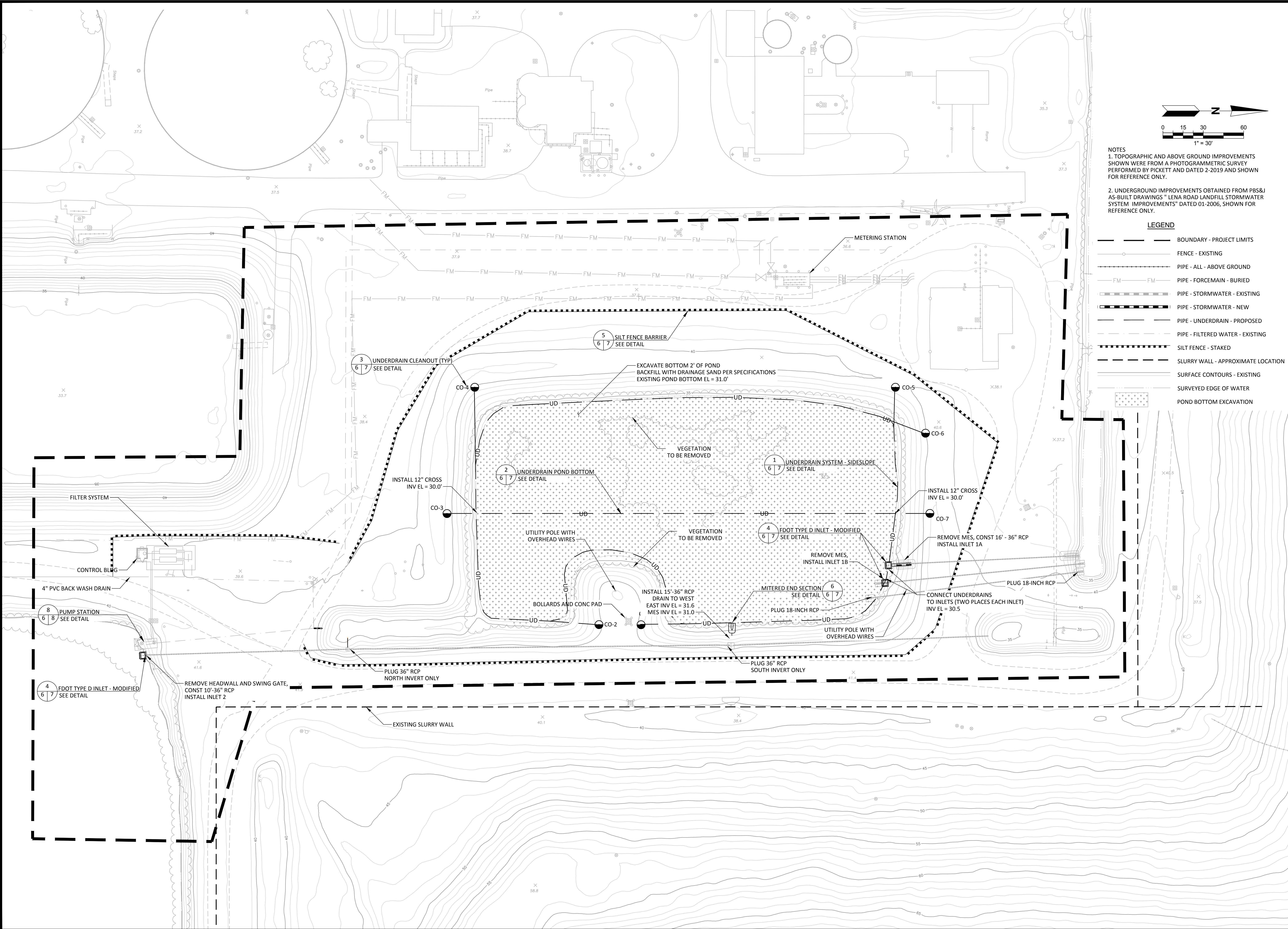
NOTES  
1. TOPOGRAPHIC AND ABOVE GROUND IMPROVEMENTS SHOWN WERE FROM A PHOTOGRAMMETRIC SURVEY PERFORMED BY PICKETT AND DATED 2-2019 AND SHOWN FOR REFERENCE ONLY.  
2. UNDERGROUND IMPROVEMENTS OBTAINED FROM PBS&J AS-BUILT DRAWINGS " LENA ROAD LANDFILL STORMWATER SYSTEM IMPROVEMENTS" DATED 01-2006, SHOWN FOR REFERENCE ONLY.

LEGEND

- BOUNDARY - PROJECT LIMITS
- FENCE
- PIPE - ALL - ABOVE GROUND
- PIPE - FORCEMAIN - BURIED
- PIPE - STORMWATER
- PIPE - FILTERED WATER
- SURFACE CONTOURS
- SURVEYED EDGE OF WATER

|  |  |   |  |
|--|--|---|--|
|  |  | CHK BY  |  |
|  |  | DESCRIPTION   |  |
|  |  | DATE  |  |
|  |  | REV   |  |
| SHEET TITLE                                  |  | EXISTING CONDITIONS                                 |  |
| PROJECT TITLE                                |  | LENA ROAD LANDFILL                                  |  |
|  |  | STORMWATER SYSTEM REVISIONS                         |  |
| CLIENT                                       |  | MANATEE COUNTY UTILITIES DEPARTMENT                 |  |
|  |  | 4410 66TH STREET WEST                               |  |
|  |  | BRADENTON, FLORIDA 34210                            |  |
| CADD FILE:                                   |  | SCS ENGINEERS                                       |  |
| SHEET 5-6 - EXISTING AND PROPOSED CONDITIONS |  | STEARN, CONRAD AND SCHMIDT                          |  |
| DATE:  |  | CONSULTING ENGINEERS                                |  |
| SCALE:                                       |  | 3922 COCONUT PALM DRIVE, SUITE 102, TAMPA, FL 33619 |  |
| DRAWING NO.                                  |  | PH (813) 621-0080 FAX NO. (813) 623-4757            |  |
| SHEET  |  | FLORIDA FIRM REGISTRATION RY-4892                   |  |
| 5  |  | C/O ARMY INC. SRF                                   |  |
| of 8   |  | KCC   |  |
|  |  | CHK BY  |  |
|  |  | WJE   |  |
|  |  | APP BY  |  |
|  |  | SRF   |  |

F:\PROJECT\09217088.16\Drawings\Engineering Drawings\Revisions (May 2020)\Sheet 5-6 - Existing and Proposed Conditions.dwg May 04, 2020 - 11:56am Layout Name: PROPOSED By: 4382kcc

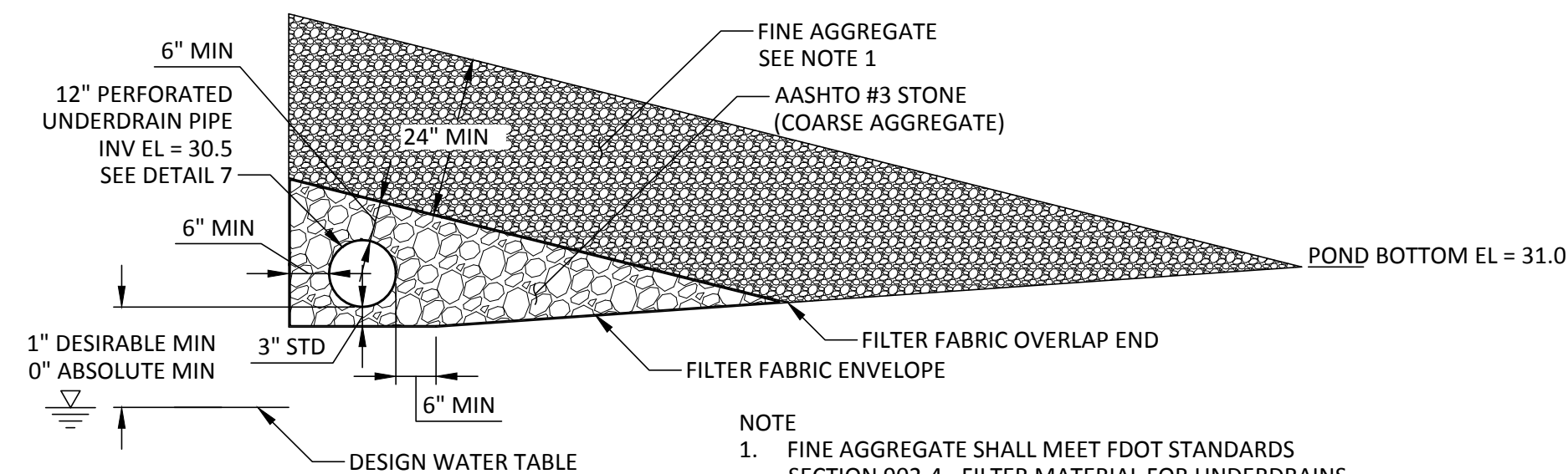


- NOTES
1. TOPOGRAPHIC AND ABOVE GROUND IMPROVEMENTS SHOWN WERE FROM A PHOTOGRAMMETRIC SURVEY PERFORMED BY PICKETT AND DATED 2-2019 AND SHOWN FOR REFERENCE ONLY.
2. UNDERGROUND IMPROVEMENTS OBTAINED FROM PBS&J AS-BUILT DRAWINGS " LENA ROAD LANDFILL STORMWATER SYSTEM IMPROVEMENTS" DATED 01-2006, SHOWN FOR REFERENCE ONLY.

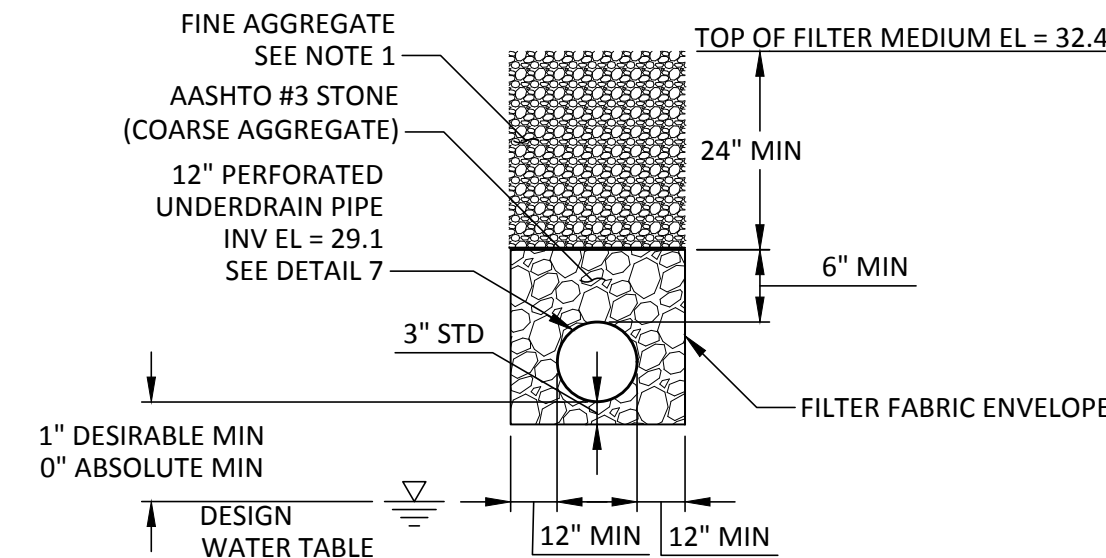
LEGEND

- BOUNDARY - PROJECT LIMITS
- FENCE - EXISTING
- PIPE - ALL - ABOVE GROUND
- PIPE - FORCEMAIN - BURIED
- PIPE - STORMWATER - EXISTING
- PIPE - STORMWATER - NEW
- PIPE - UNDERDRAIN - PROPOSED
- PIPE - FILTERED WATER - EXISTING
- SILT FENCE - STAKED
- SLURRY WALL - APPROXIMATE LOCATION
- SURFACE CONTOURS - EXISTING
- SURVEYED EDGE OF WATER
- POND BOTTOM EXCAVATION

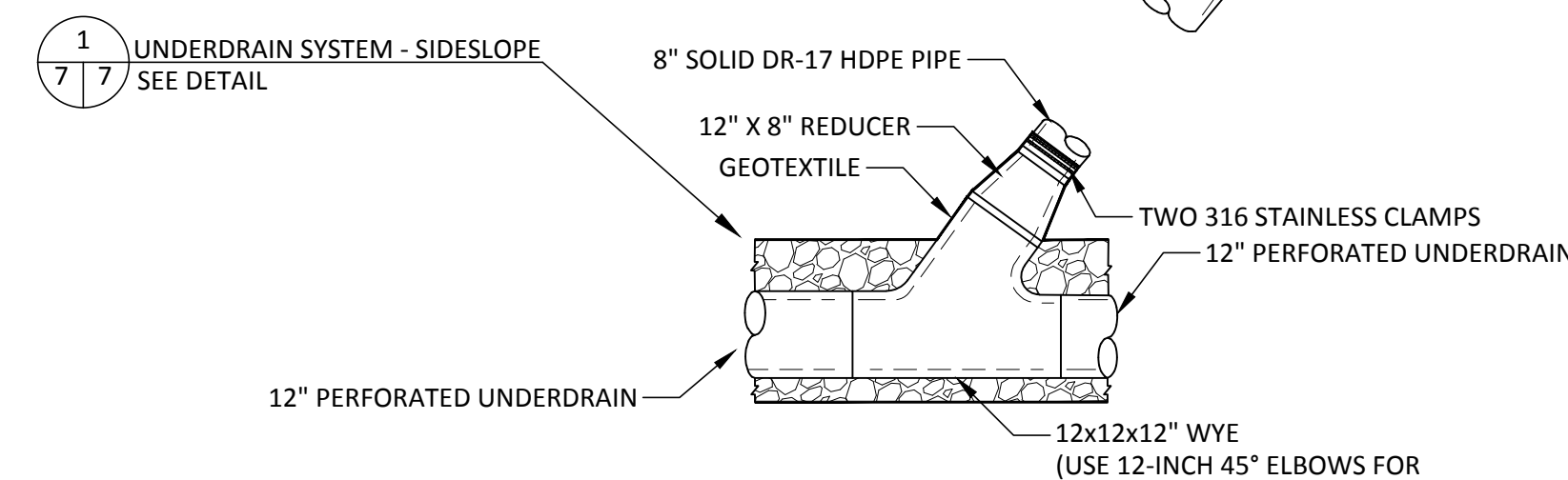
|   |                |
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|   |                |
| CHK BY  |                |
| DESCRIPTION   |                |
| DATE  |                |
| REV   |                |
| SHEET TITLE POND CONTROL MODIFICATION PLAN  |                |
| PROJECT TITLE LENA ROAD LANDFILL STORMWATER SYSTEM REVISIONS  |                |
| CLIENT MANATEE COUNTY UTILITIES DEPARTMENT 4410 66TH STREET WEST BRADENTON, FLORIDA 34210   |                |
| SCS ENGINEERS STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS 3922 COCONUT PALM DRIVE, SUITE 102, TAMPA, FL 33619 PH (813) 621-0080 FAX NO. (813) 623-4757 FLORIDA FIRM REGISTRATION RY-4892 |                |
| DESIGNER DWG BY KKC   | CHECKED BY WJE |
| DATE 09/21/2025   | APP BY SRF     |
| CADD FILE: SHEET 5-6 - EXISTING AND PROPOSED CONDITIONS   |                |
| DATE: MAY 2020  |                |
| SCALE: AS SHOWN   |                |
| DRAWING NO. 6   |                |
| SHEET 6   | of 8           |



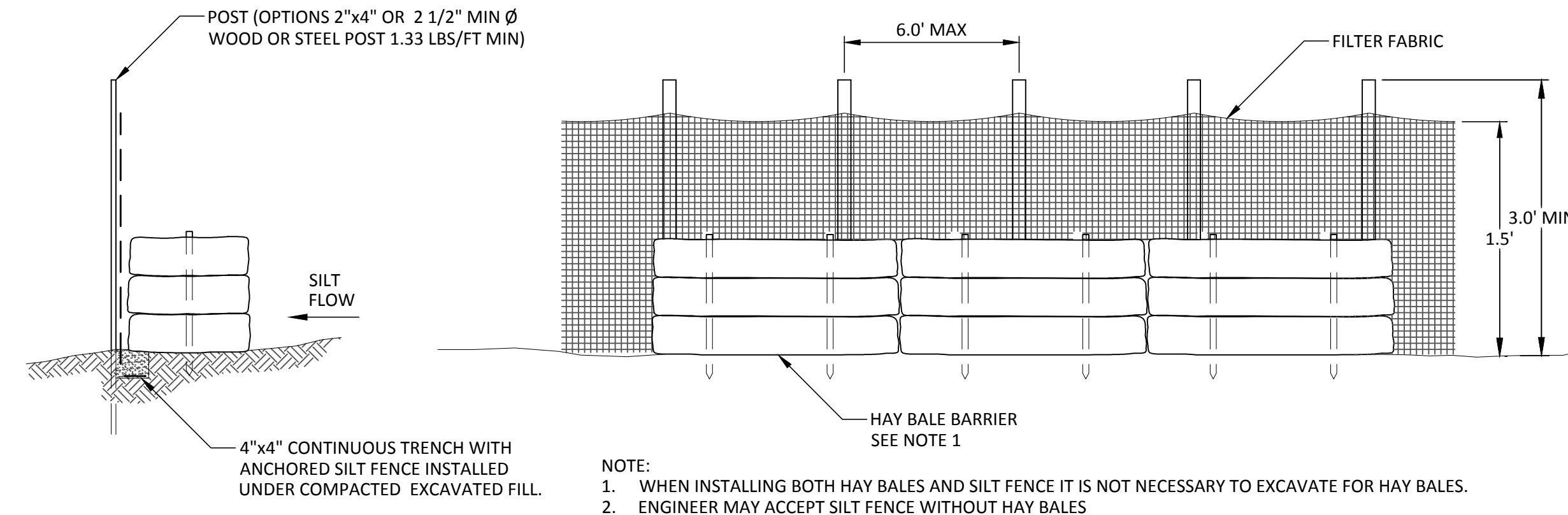
### UNDERDRAIN SYSTEM - SIDESLOPE DETAIL



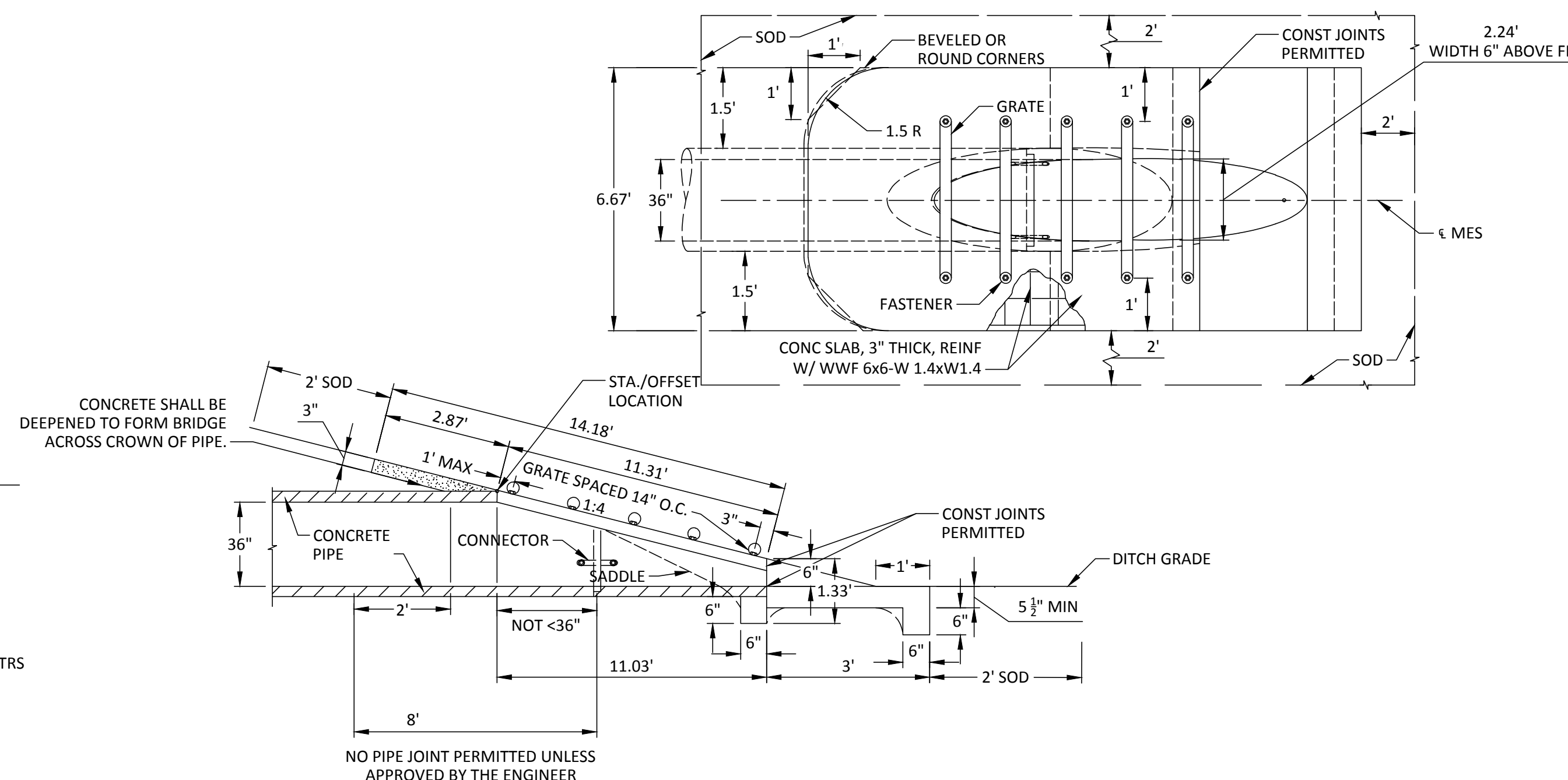
### UNDERDRAIN POND BOTTOM DETAIL



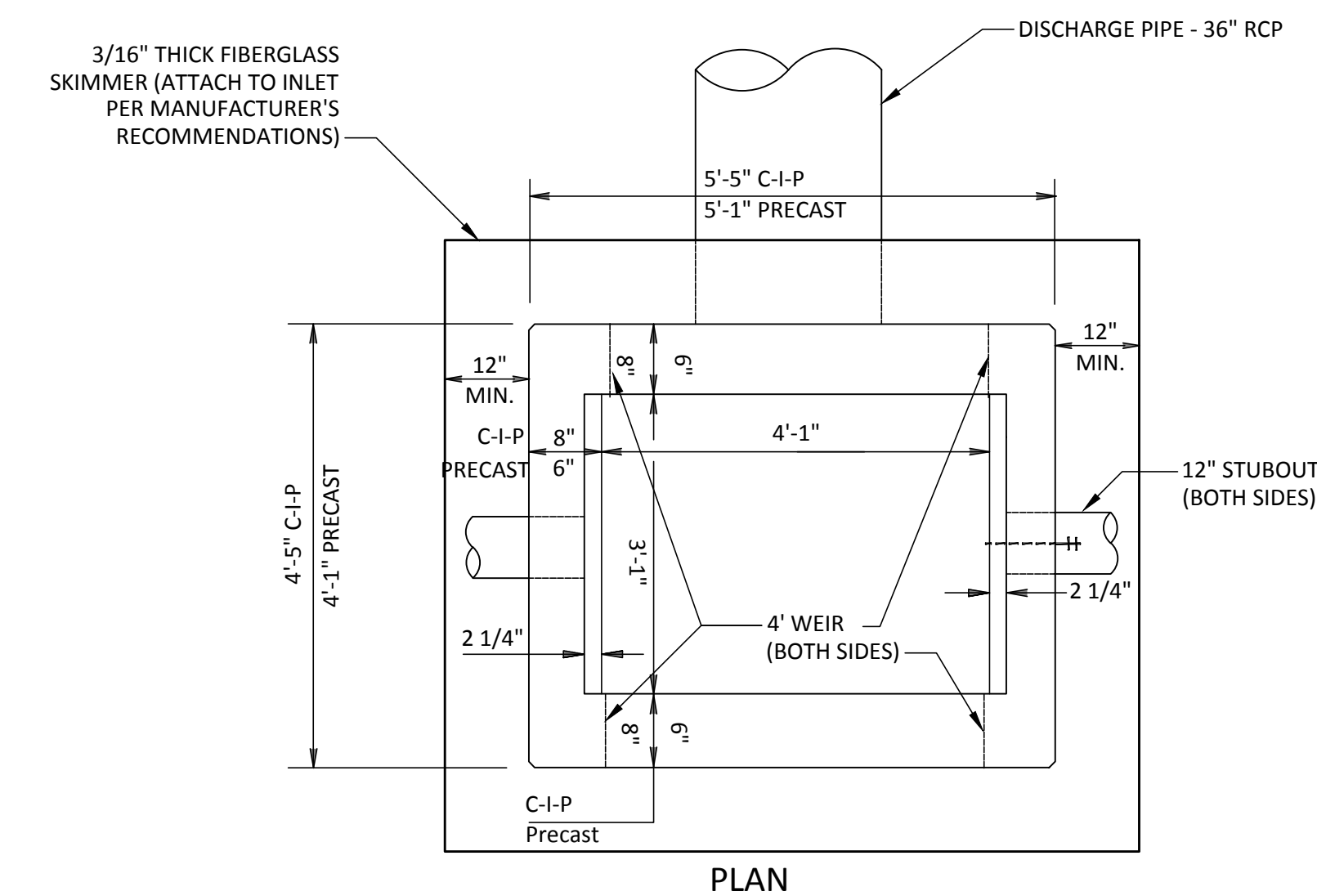
### UNDERDRAIN CLEANOUT DETAIL



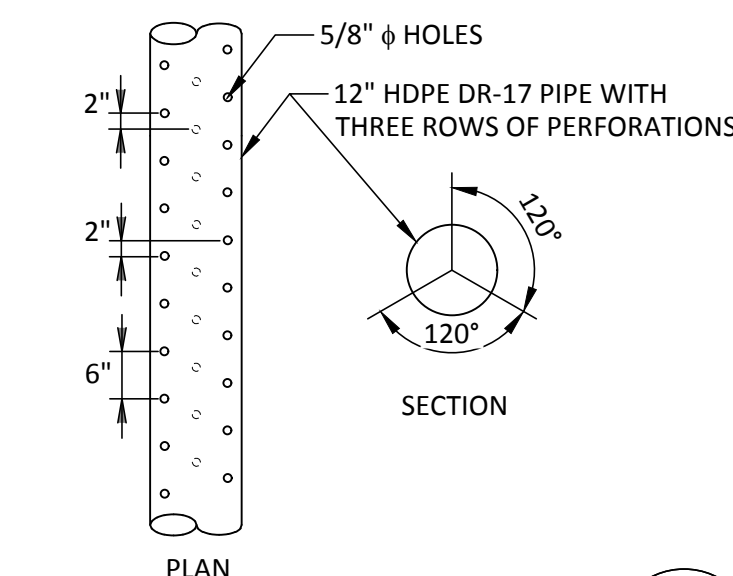
**SILT FENCE BARRIER DETAIL** (5)  
NOT TO SCALE (6)



**MITERED END SECTION** 6  
NOT TO SCALE



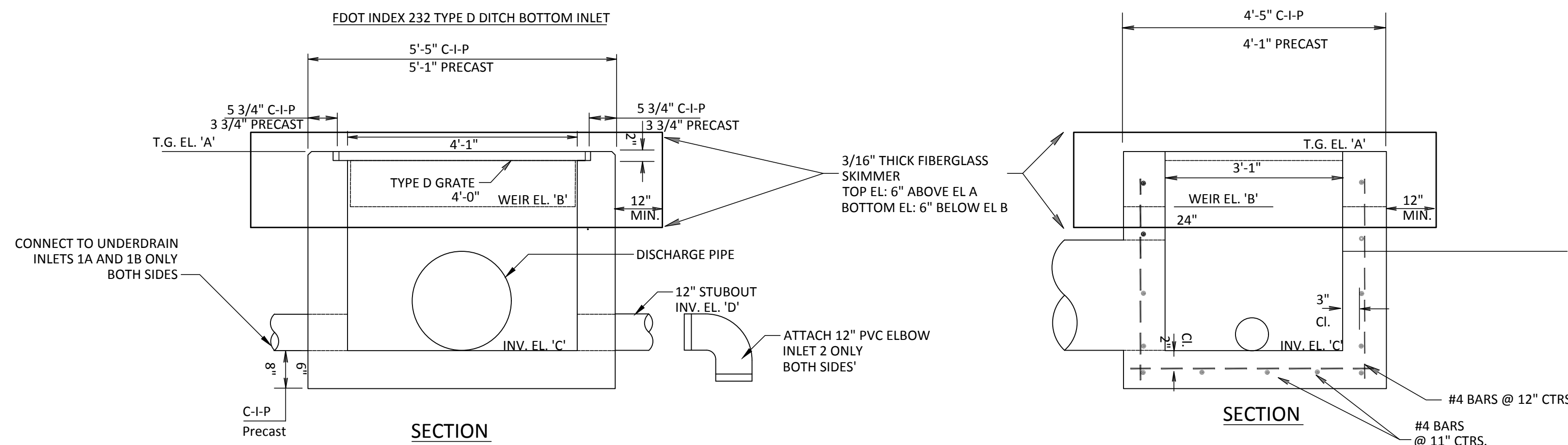
### CONTROL STRUCTURE DETAIL



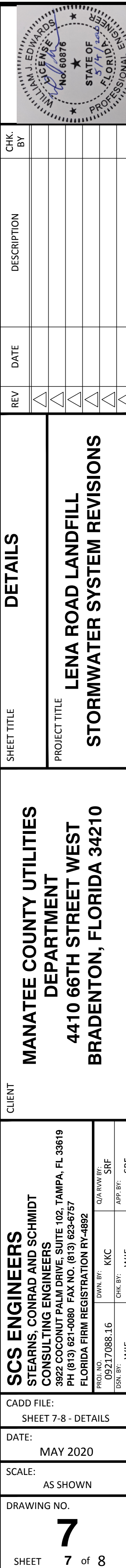
## PIPE PERFORATION

| STR. NO. | ELEVATION 'A' | ELEVATION 'B' | ELEVATION 'C'    | ELEVATION 'D'     |
|----------|---------------|---------------|------------------|-------------------|
| 1A       | 38.0          | 37.0          | 30.5<br>36" RCP  | 30.0*<br>12" HDPE |
| 1B       | 37.5          | 36.5          | 30.0*<br>18" RCP | 30.0*<br>12" HDPE |
| 2        | 37.7          | 36.7          | 30.0*<br>36" RCP | 32.0<br>12" PVC   |

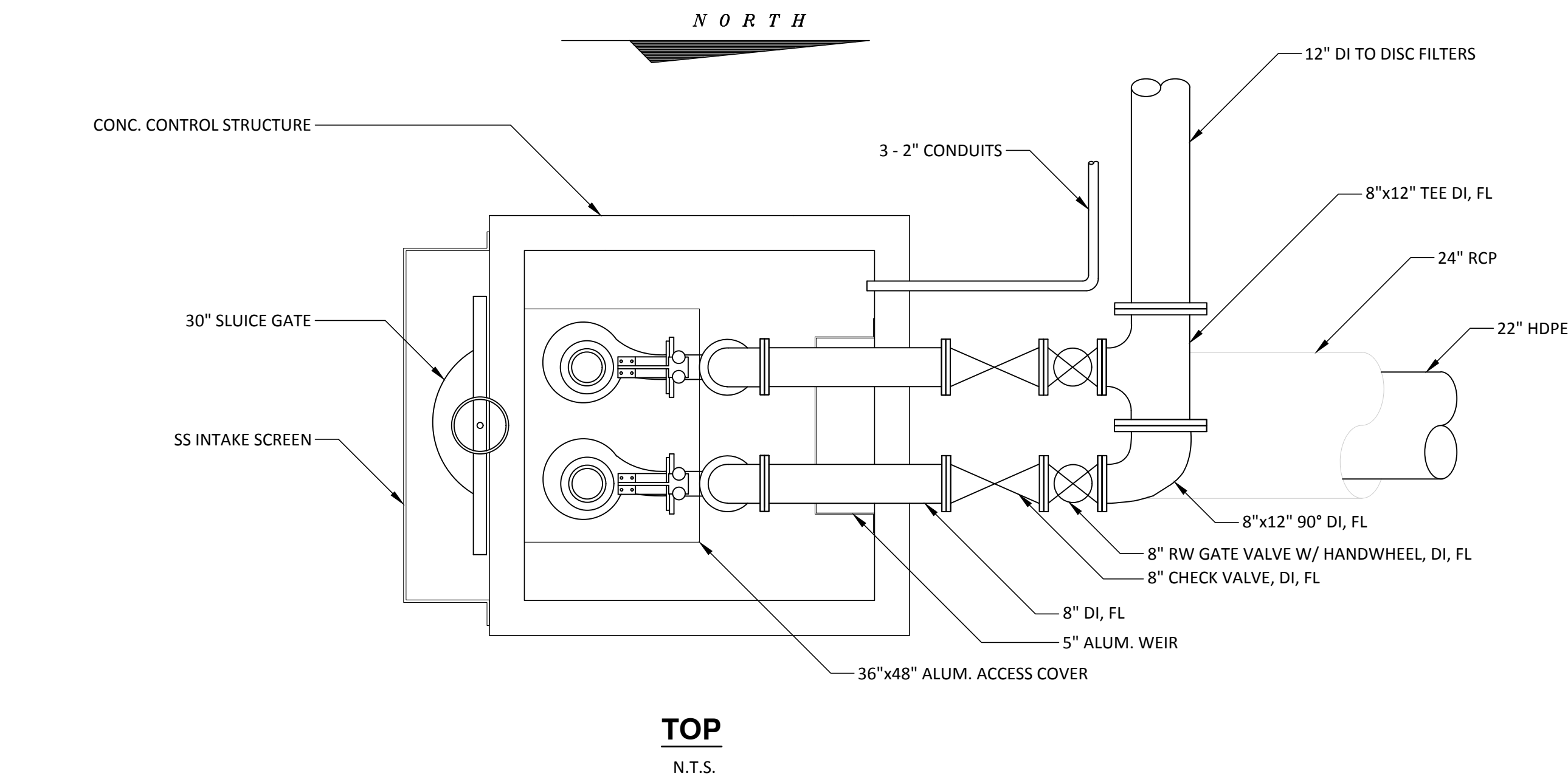
\* INLET BOTTOM INTERIORS SET AT LOWEST INVERT ELEVATION WHICH IS AT ELEVATION 30.0 FOR EACH STRUCTURE.



### CONTROL STRUCTURE DETAIL



F:\PROJECT\09217088.16\Drawings\Engineering Drawings\Revisions (May 2020)\Sheet 7-8 - DETAILS.dwg May 04, 2020 - 11:58am Layout Name: Layout1 By: 4382kcc



### PUMP SPECIFICATIONS

|  |                               |
|--|-------------------------------|
| PUMP REQUIRED  | TWO                           |
| MFGR. & MODEL NO.:                                       | FLYGT C-3252                  |
| PUMP SIZE  | 6" DISCHARGE                  |
| PUMP CAPACITY  | 800 GPM                       |
| TOTAL HEAD   | 80 FT.                        |
| IMPELLER NO.   | 452                           |
| MOTOR REQUIREMENTS *                                     | 23 HP. MIN. 460 VOLT, 3 PHASE |
| SPEED  | 1750 R.P.M.                   |
| ELECTRICAL SERVICE                                       | 460 VOLTS, 3 PHASE, 60 HERTZ  |
| * HP SHALL BE ADEQUATE THRU ALL POINTS ON THE PUMP CURVE |                               |

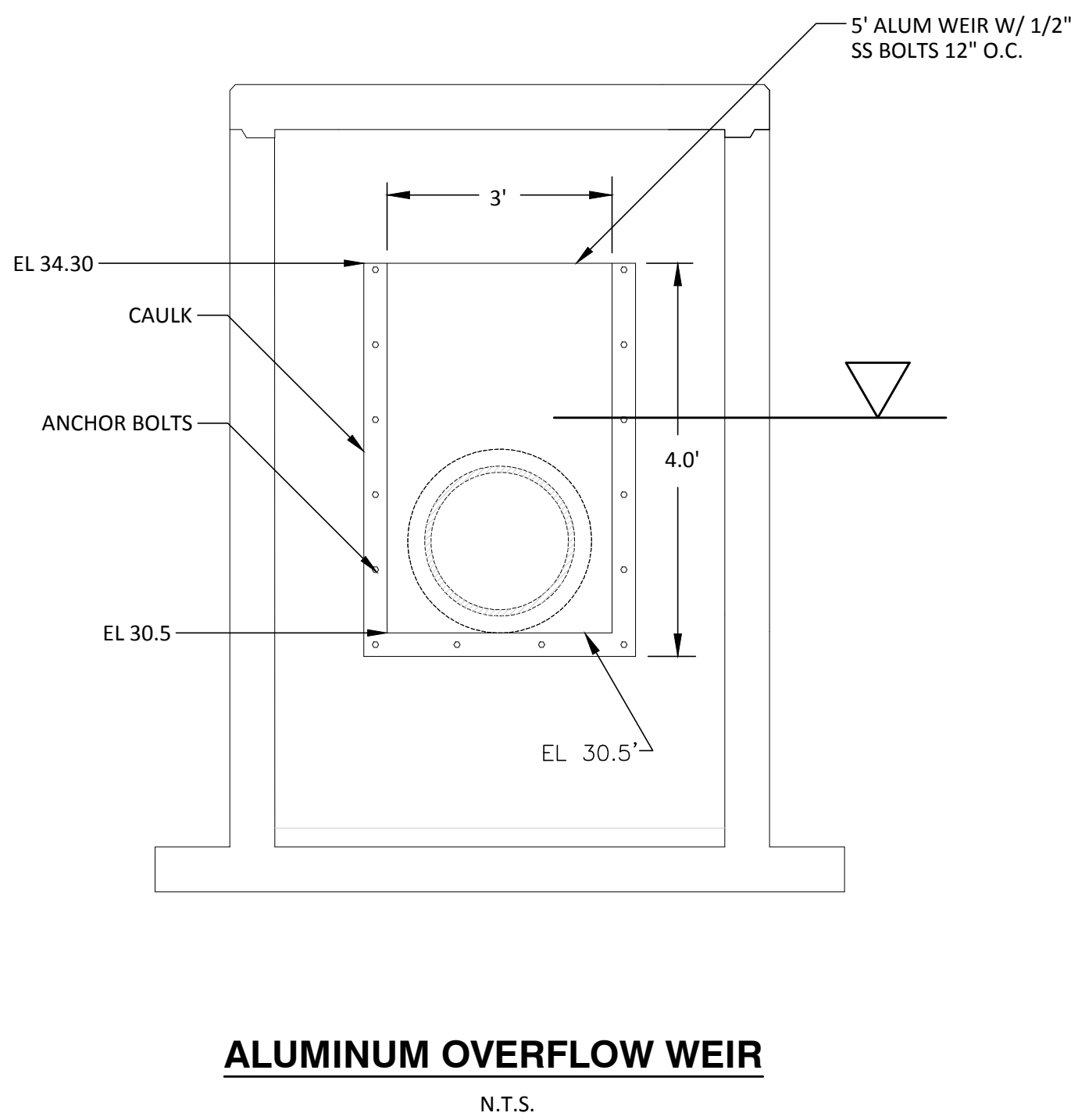
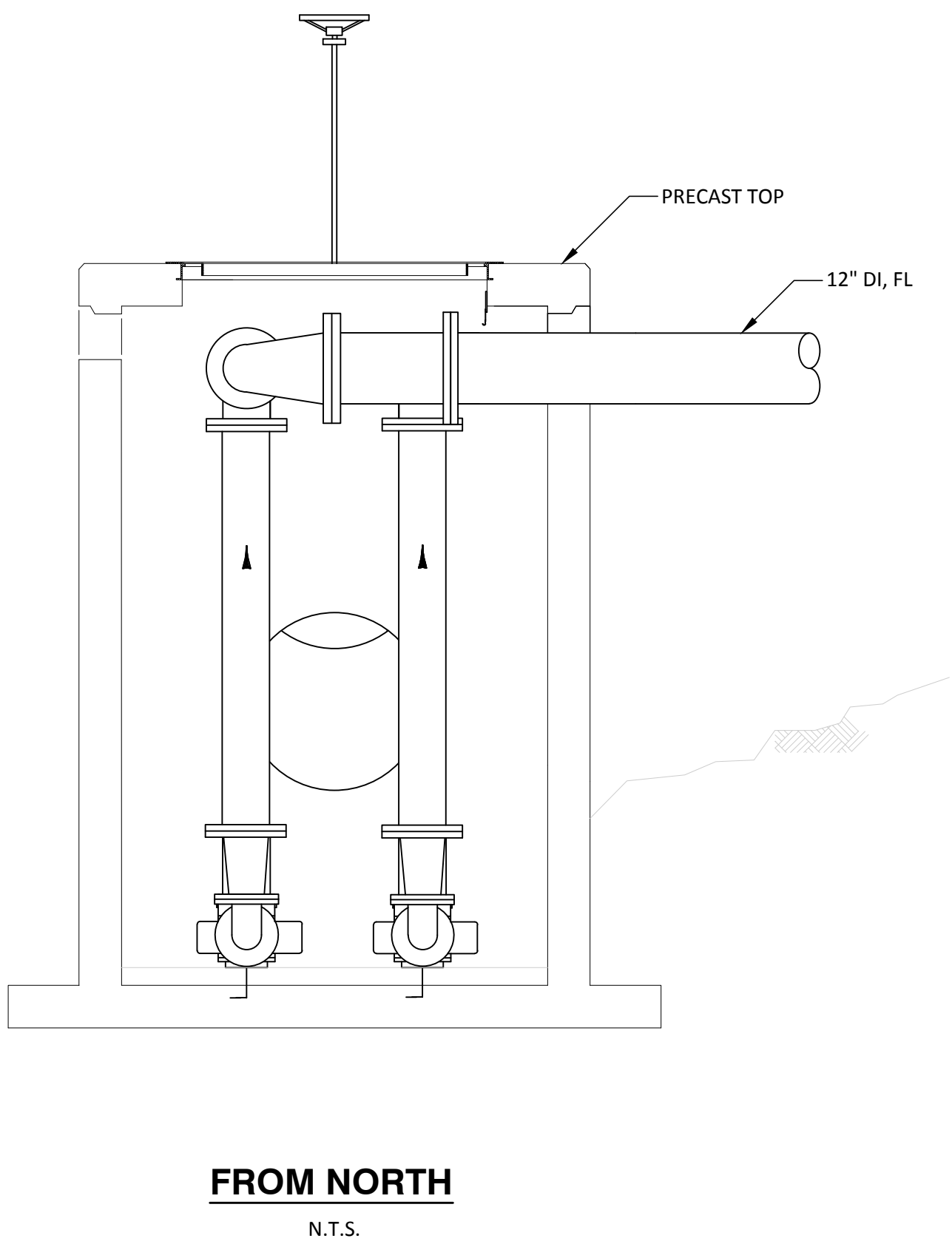
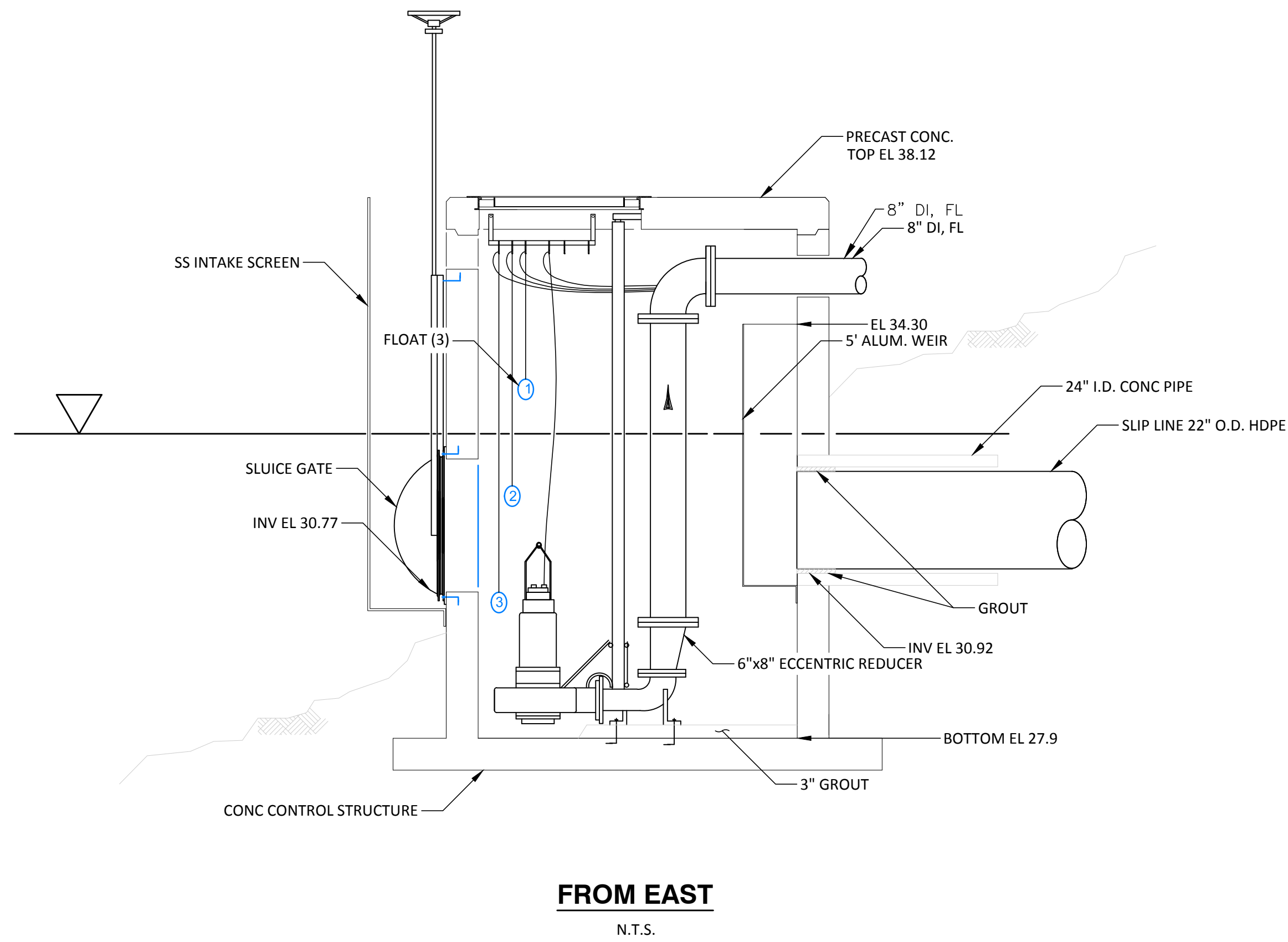
### PUMP CONTROL LEVELS

|                     |       |       |
|---------------------|-------|-------|
| ▽ HIGH WATER ALARM  | ELEV. | 34.00 |
| ▽ LEAD PUMP No.1 ON | ELEV. | 32.77 |
| ▽ ALL PUMPS OFF     | ELEV. | 30.77 |

### STATION DESIGN

800 GPM (ONE PUMP)  
1600 GPM (TWO PUMPS)

NOTE:  
EXISTING INFORMATION PROVIDED FOR  
REFERENCE ONLY. NO MODIFICATIONS  
REQUIRED FOR THE PUMP STATION.



NOTE: THIS SHEET IS FOR INFORMATION ONLY.  
NO MODIFICATION OF PUMP STATION IS INCLUDED IN THIS PROJECT.

**PUMP STATION**  
NOT TO SCALE

**8**  
5,6 8

|   |   |             |          |          |          |      |   |   |   |
|---|---|-------------|----------|----------|----------|------|---|---|---|
|   |   | CHK BY      |          |          |          |      |   |   |   |
|   |   | DESCRIPTION |          |          |          |      |   |   |   |
|   |   | DATE        |          |          |          |      |   |   |   |
|   |   | REV         | ◀        | ◀        | ◀        | ◀    | ◀ | ◀ | ◀ |
| SHEET TITLE   | <b>PUMP SYSTEM DETAILS<br/>(INFORMATION ONLY)</b>   |             |          |          |          |      |   |   |   |
| PROJECT TITLE   | <b>LENA ROAD LANDFILL<br/>STORMWATER SYSTEM REVISIONS</b>   |             |          |          |          |      |   |   |   |
| CLIENT  | <b>MANATEE COUNTY UTILITIES<br/>DEPARTMENT<br/>4410 66TH STREET WEST<br/>BRADENTON, FLORIDA 34210</b> |             |          |          |          |      |   |   |   |
| <b>SCS ENGINEERS</b><br>STEARNS, CONRAD AND SCHMIDT<br>CONSULTING ENGINEERS<br>3922 COCONUT PALM DRIVE, SUITE 102, TAMPA, FL 33619<br>PH (813) 621-0080 FAX NO. (813) 623-6757<br>FLORIDA FIRM REGISTRATION RY-4892 | DESIGNER  | CHK'D BY    | W/JE     | APP'D BY | S/RP     |      |   |   |   |
|   | DRAWN BY  | CHK'D BY    | W/JE     | APP'D BY | S/RP     |      |   |   |   |
|   | CHECKED BY  | CHK'D BY    | W/JE     | APP'D BY | S/RP     |      |   |   |   |
|   | DATE  | 09/21/2016  | CHK'D BY | W/JE     | APP'D BY | S/RP |   |   |   |
| CADD FILE:<br>SHEET 7-8 - DETAILS   |   |             |          |          |          |      |   |   |   |
| DATE:<br>MAY 2020   |   |             |          |          |          |      |   |   |   |
| SCALE:<br>AS SHOWN  |   |             |          |          |          |      |   |   |   |
| DRAWING NO.<br><b>8</b>   |   |             |          |          |          |      |   |   |   |
| SHEET <b>8</b> of 8   |   |             |          |          |          |      |   |   |   |