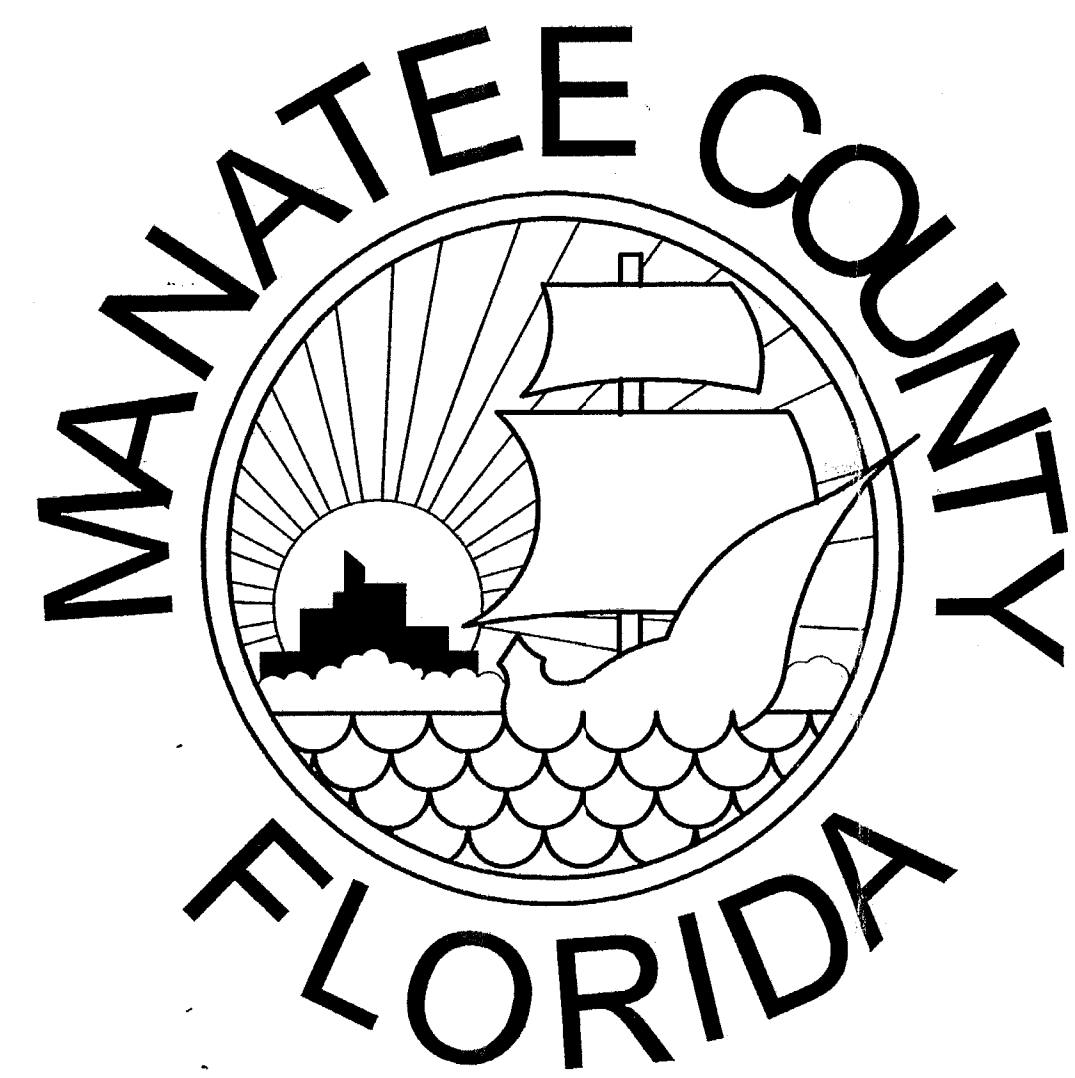


CONSTRUCTION PLANS FOR LENA ROAD LANDFILL STORMWATER SYSTEM IMPROVEMENTS

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PREPARED FOR:

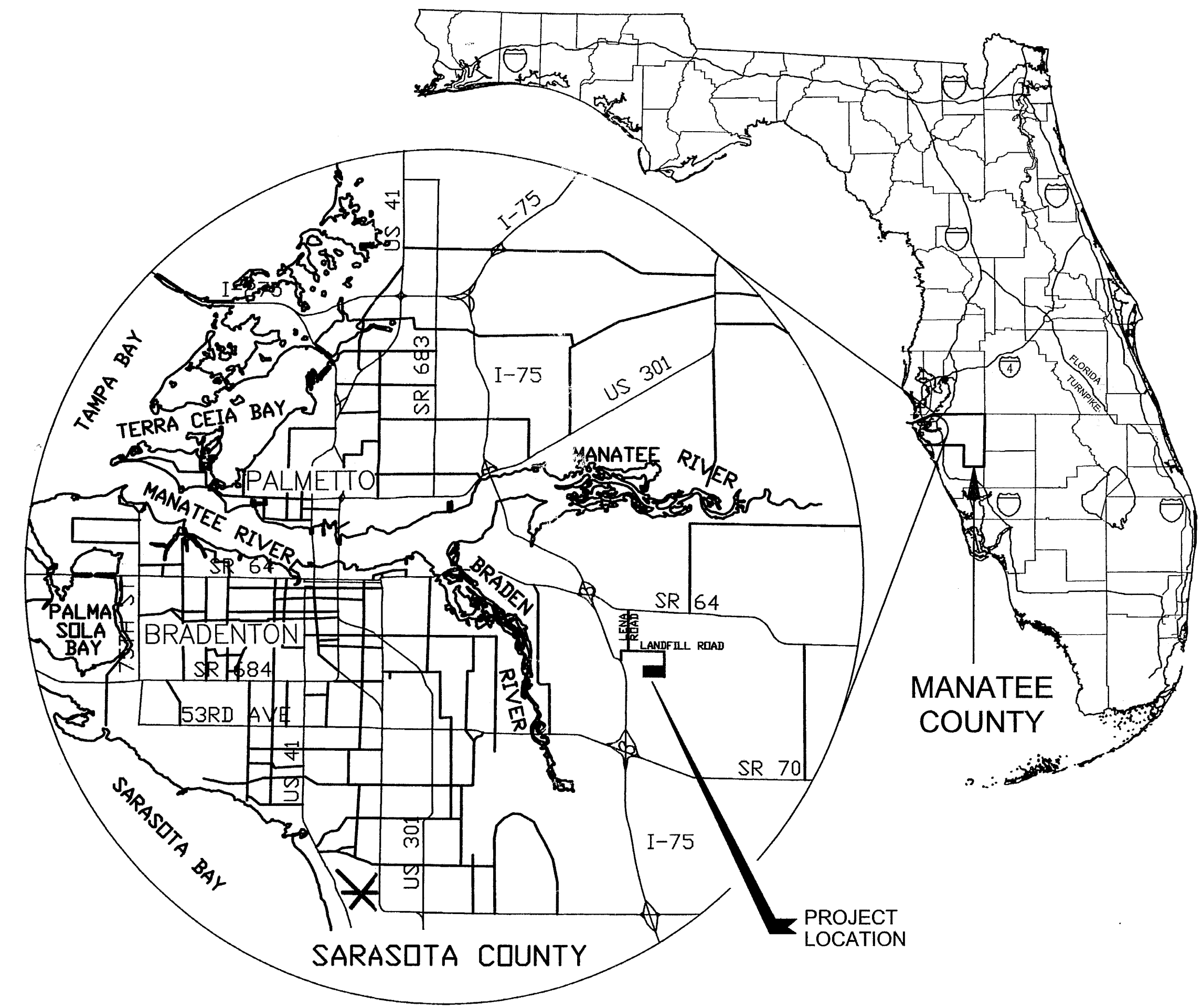
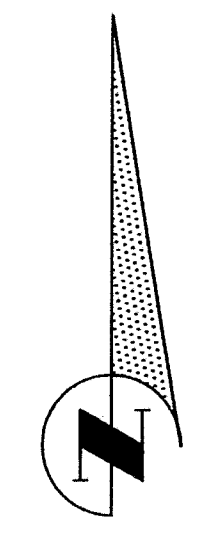


**MANATEE COUNTY
PROJECT MANAGEMENT
DEPARTMENT**

1026 26th AVENUE EAST
BRADENTON, FLORIDA 34208

PREPARED BY:

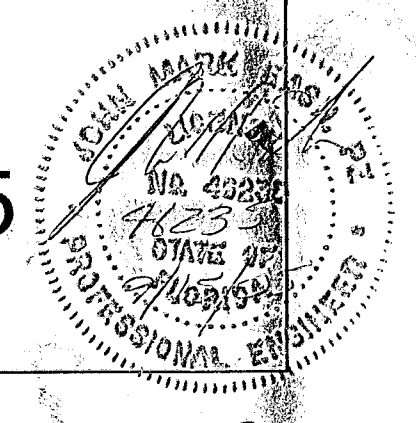
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 FBPR CERT. OF AUTH. No. 24
 PRODUCTION ADDRESS:
 2803 FRUITVILLE ROAD, STE 130
 SARASOTA, FLORIDA 34237
 Ph. (941) 954-4036



VICINITY MAP

D.E.P.
SEP 10 2005
Southwest District Tampa

SEPTEMBER, 2005



FILE

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL CONDITIONS AND REQUIREMENTS OF ALL PERMITS AND ALL GOVERNING FEDERAL, STATE, AND LOCAL AGENCIES.
2. EXISTING UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN LOCATED FROM THE BEST AVAILABLE SURVEY DATA AND RECORDS AND THEIR LOCATIONS MUST ONLY BE CONSIDERED AS APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE PLANS AND ANY OTHER UTILITIES WHICH MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN THE AREA AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION. CALL FLORIDA SUNSHINE STATE ONE CALL CENTER AT 1-800-432-4770.
3. A HORIZONTAL SPACING OF 10 FEET OUTSIDE TO OUTSIDE SHALL BE MAINTAINED BETWEEN POTABLE WATER MAINS AND ANY SANITARY SEWER MAINS. IN THE CASE OF A CROSSING, A VERTICAL SEPARATION OF NOT LESS THAN 18" SHALL BE MAINTAINED.
4. THE CONTRACTOR SHALL PROVIDE ALL DEWATERING EQUIPMENT NECESSARY TO KEEP ALL EXCAVATIONS DRY AND SHALL PROVIDE ALL NECESSARY SHEETING, SHORING, AND BRACING NECESSARY TO PROTECT ADJACENT STRUCTURES, UTILITIES, AND PAVEMENT, OR TO MINIMIZE TRENCH WIDTH.
5. THE CONTRACTOR SHALL PROVIDE HAY BALES AND/OR SILT FENCES AROUND THE CONSTRUCTION ACTIVITY, AS NECESSARY, TO PREVENT THE TRANSPORTATION OF SEDIMENTS DOWNSTREAM INTO STREETS, STORM SEWERS, OPEN DITCHES, LAKES, RETENTION PONDS, PRIVATE PROPERTY, ETC., AND SHALL PERFORM ALL NECESSARY INSPECTIONS AND MAINTENANCE IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN (SPPP), AND FEDERAL, STATE, AND LOCAL GOVERNING AGENCY REQUIREMENTS.
6. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S CONSTRUCTION MANAGER REGARDING ANY CONFLICTS OR DISCREPANCIES ARISING DURING CONSTRUCTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES, STRUCTURES, OR UTILITIES CAUSED BY CONSTRUCTION OPERATIONS WHICH HAVE BEEN PREVIOUSLY LOCATED BY THEIR RESPECTIVE OWNERS.
8. CONNECTIONS TO EXISTING FACILITIES SHALL BE DONE IN THE PRESENCE OF THE UTILITY OWNER AND THE ENGINEER. THE CONTRACTOR SHALL GIVE AT LEAST 2 WEEKS NOTICE TO ALL PARTIES CONCERNED PRIOR TO BEGINNING WORK.
9. ALL SURPLUS EXCAVATION AND DEMOLITION MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE FLORIDA TRENCH SAFETY ACT, 90-96, LAWS OF FLORIDA, EFFECTIVE OCTOBER 1, 1990, AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION EXCAVATION SAFETY STANDARDS, 29 CFR 1926.650, SUBPART P, AS AMENDED. THE CONTRACTOR SHALL INCLUDE IN THE TOTAL BID PRICE, ALL COSTS FOR COMPLIANCE WITH THESE REGULATIONS.
11. ALL DISTURBED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE NOTED.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY DAMAGED ITEMS SUCH AS DRIVEWAYS, MAILBOXES, STREET SIGNS, FENCES, ETC., AS DEEMED NECESSARY BY THE COUNTY AND/OR ENGINEER.
13. ALL ELEVATIONS ARE BASED UPON NATIONAL GEODETIC VERTICAL DATUM, 1929.
14. THE CONTRACTOR SHALL BE REQUIRED TO OBTAIN ALL APPLICABLE PERMITS.
15. ALL FITTINGS USED ON THIS PROJECT SHALL BE DUCTILE IRON UNLESS OTHERWISE SHOWN. ALL MECHANICAL JOINT FITTINGS AND VALVES ARE TO BE RESTRAINED USING THE "MEGA-LUG" SYSTEM OR EQUAL.
16. THE EXHAUST SYSTEM OF ALL GASOLINE AND DIESEL ENGINES SHALL BE EQUIPPED WITH MUFFLERS THAT MEET THE EQUIPMENT MANUFACTURER'S REQUIREMENTS FOR NOISE SUPPRESSION. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER DUE TO RESIDENTIAL COMPLAINTS, INSTALL NOISE ABATEMENT BAFFELS POSITIONED TO BREAK LINE-OF-SITE FROM THE NOISE SOURCE TO AFFECTED RESIDENCES, AS APPROVED BY THE ENGINEER.

17. THE CONTRACTOR SHALL PROVIDE PROPER WARNING SIGNS, BARRICADES, TEMPORARY FENCING AND OTHER APPROPRIATE SAFETY DEVICES DURING THE EXECUTION OF THE WORK TO PROVIDE PUBLIC PROTECTION AND SAFETY.
18. MAINTENANCE OF TRAFFIC SIGNS AND OTHER TRAFFIC CONTROL DEVICES SHALL BE PROVIDED BY THE CONTRACTOR DURING CONSTRUCTION AS REQUIRED BY THE F.D.O.T.
19. THE CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL CLEARED VEGETATION WITHIN FIVE DAYS OF CLEARING AND GRUBBING WORK.
20. THE CONTRACTOR SHALL PROVIDE ACCESS FOR TRAFFIC AT ALL TIMES DURING CONSTRUCTION.

ABBREVIATIONS

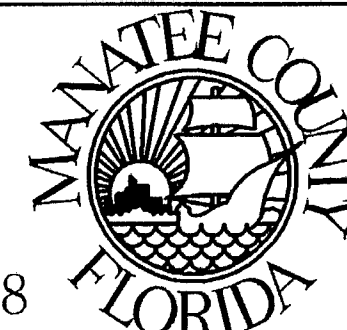
| | | | |
|----------|-----------------------------|-------------|--|
| APPROX | APPROXIMATELY | LSB | LICENSED SURVEYOR BUSINESS |
| ALUM | ALUMINUM | LF | LINEAL FEET |
| ARV | AIR RELEASE VALVE (MANUAL) | LT | LEFT |
| AWWA | AMERICAN WATER WORKS ASSOC. | MAX | MAXIMUM |
| AVG | AVERAGE | MJ | MECHANICAL JOINT |
| ℄ | BASE LINE | MISC | MISCELLANEOUS |
| BOC | BACK OF CURB | MIN | MINIMUM |
| BWF | BARBED WIRE FENCE | NTS | NOT TO SCALE |
| BFV | BUTTERFLY VALVE | OCEW | ON CENTER EACH WAY |
| CLF | CHAIN LINK FENCE | OD | OUTSIDE DIAMETER |
| CF | CUBIC FEET | OH | OVERHEAD |
| ℄ | CENTERLINE | OHL | OVERHEAD LINES |
| CLR | CLEARANCE | PE | PLAIN END |
| CM | CONCRETE MONUMENT | PRM | PERMANENT REFERENCE MARKER |
| CMP | CORRUGATED METAL PIPE | PVC | POLYVINYL CHLORIDE |
| CONC | CONCRETE | PSI | POUNDS PER SQUARE INCH |
| CONN | CONNECT | RCP | REINFORCED CONCRETE PIPE |
| CONT | CONTINUOUS | RDCR | REDUCER |
| COR | CORNER | REQ'D | REQUIRED |
| DFT | DRY FILM THICKNESS | RJ | RESTRAINED JOINT |
| DIA, d | DIAMETER | R/W | RIGHT-OF-WAY |
| DI, DIP | DUCTILE IRON PIPE | RWGV | RESILIENT WEDGE GATE VALVE W/ LOW ZINC STEM & NUT |
| D/W | DRIVEWAY | RT | RIGHT |
| E | EAST | SCHD | SCHEDULE |
| EL, ELEV | ELEVATION | SHT | SHEET |
| EOP | EDGE OF PAVEMENT | SQ.FT. | SQUARE FEET |
| ERC | EROSION CONTROL | SST, ST/STL | STAINLESS STEEL |
| EXIST/EX | EXISTING | STA | STATION |
| FL | FLANGED | STS | STORM SEWER |
| FM | FORCE MAIN | TOB | TOP OF BANK |
| FND | FOUND | TOS | TOE OF SLOPE |
| FPS | FEET PER SECOND | TYP. | TYPICAL |
| FT | FEET | W | WEST |
| FTB | FLOATING TURBIDITY BARRIER | W/ | WITH |
| GAL | GALLONS | WM | POTABLE WATER MAIN |
| GV | GATE VALVE | | |
| HDPE | HIGH DENSITY POLYETHYLENE | | |
| HR | HOUR | | |
| ID | IDENTIFICATION | | |
| INV | INVERT | | |
| IR | IRON ROD | | |
| LB | POUND | | |

LEGEND

- RCP = REINFORCED CONCRETE PIPE
- ERCP = ELLIPTICAL REINFORCED CONCRETE PIPE
- PVC = POLY VINYL CHLORIDE PIPE
- IE = INVERT ELEVATION
- ELEV = ELEVATION
- W/ = WITH
- TOS = TOP OF SLOPE
- TOB = TOP OF BANK
- ASPH = ASPHALT
- CONC = CONCRETE
- ⊙ = MANHOLE
- ⊙ = SANITARY MANHOLE

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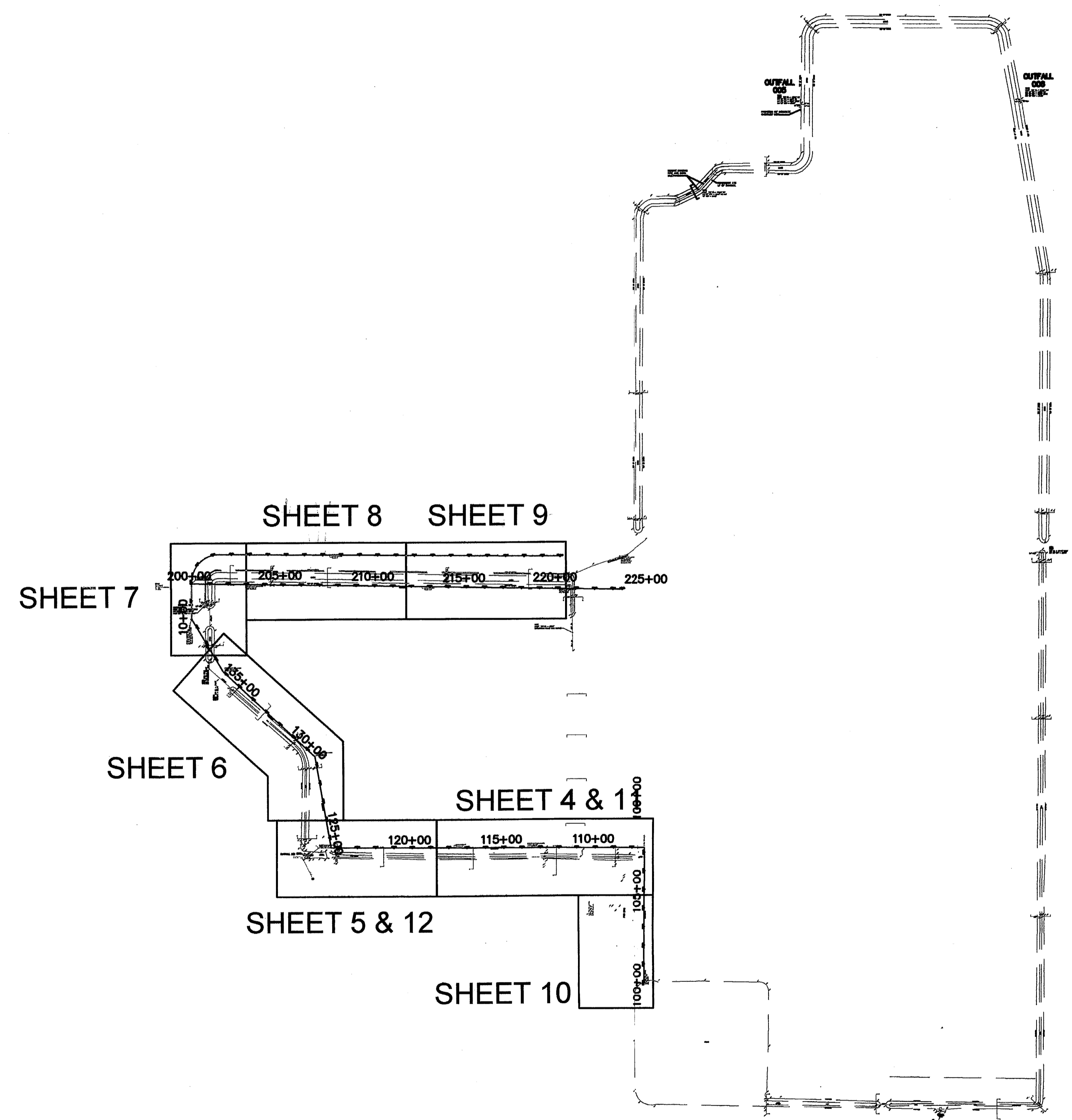
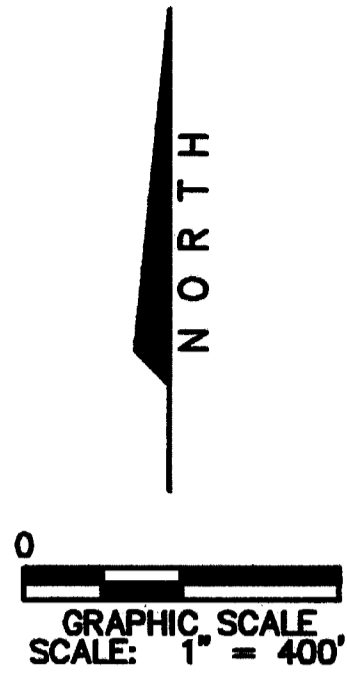
CLIENT
 MANATEE COUNTY
 PROJECT MANAGEMENT
 DEPARTMENT

 1026 26th AVENUE EAST
 BRADENTON, FLORIDA 34208

PROJECT
 LENA ROAD LANDFILL
 STORMWATER SYSTEM IMPROVEMENTS

TASK
 GENERAL NOTES, LEGEND
 AND ABBREVIATIONS

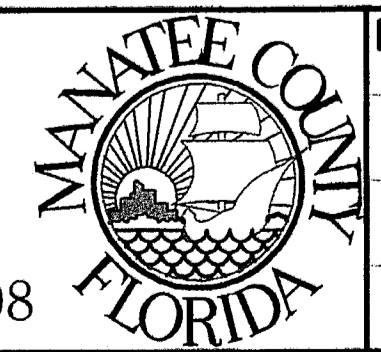
ORIGINAL: JUNE, 03
 REVISIONS:
 1 HIGH DENSITY POLYETHYLENE
 2
 3
 4
 5

ENGINEER: J. E. EASH
 REG. NO. 46289
 JOB NO. 120507.10
 DRAWN: JAS
 DESIGNED: JME
 CHECKED: JME
 QC: DAW
 SHEET 2



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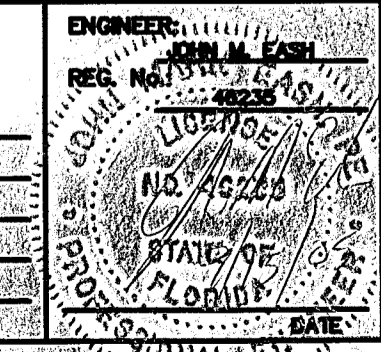
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 MANATEE COUNTY
 PROJECT MANAGEMENT
 DEPARTMENT
 1026 26th AVENUE EAST
 BRADENTON, FLORIDA 34208



PROJECT
 LENA ROAD LANDFILL
 STORMWATER SYSTEM IMPROVEMENTS

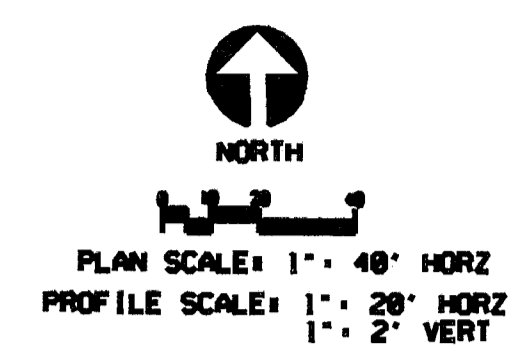
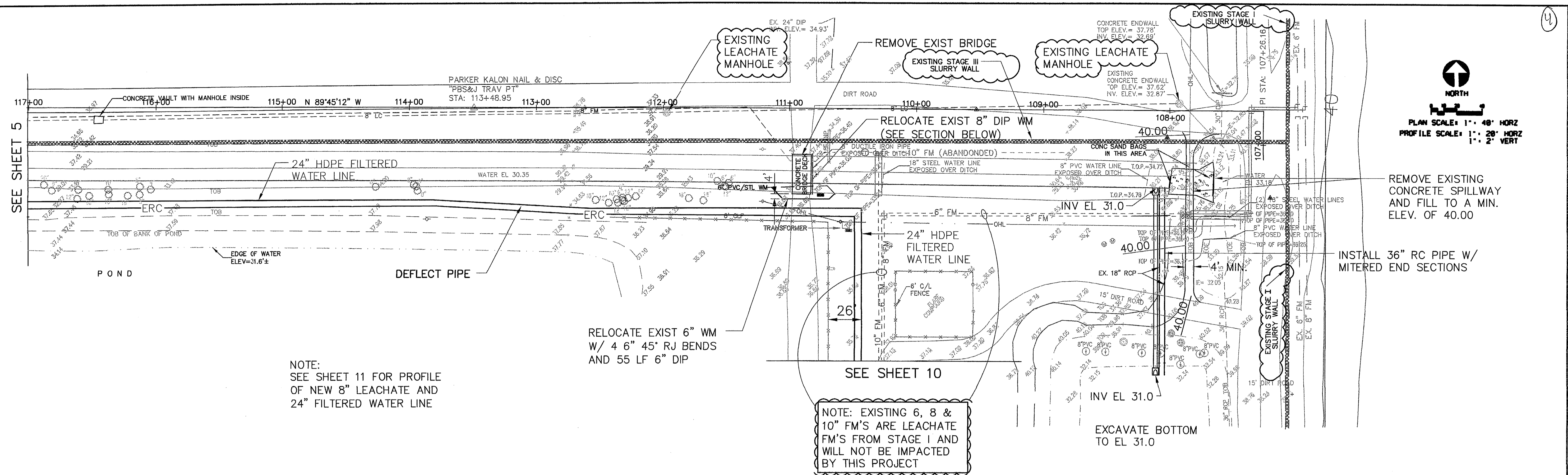
TASK
 KEY SHEET

ORIGINAL: JUNE, 03
 REVISIONS:
 1 ADDED BASELINES
 2
 3
 4
 5



JOB NO. 120507.10
 DRAWN JAS
 DESIGNED JME
 CHECKED JME
 QC DAW
 SHEET 3

SEP 20 2005
 Southwest District Tampa



NOTE:
SEE SHEET 11 FOR PROFILE
OF NEW 8" LEACHATE AND
24" FILTERED WATER LINE

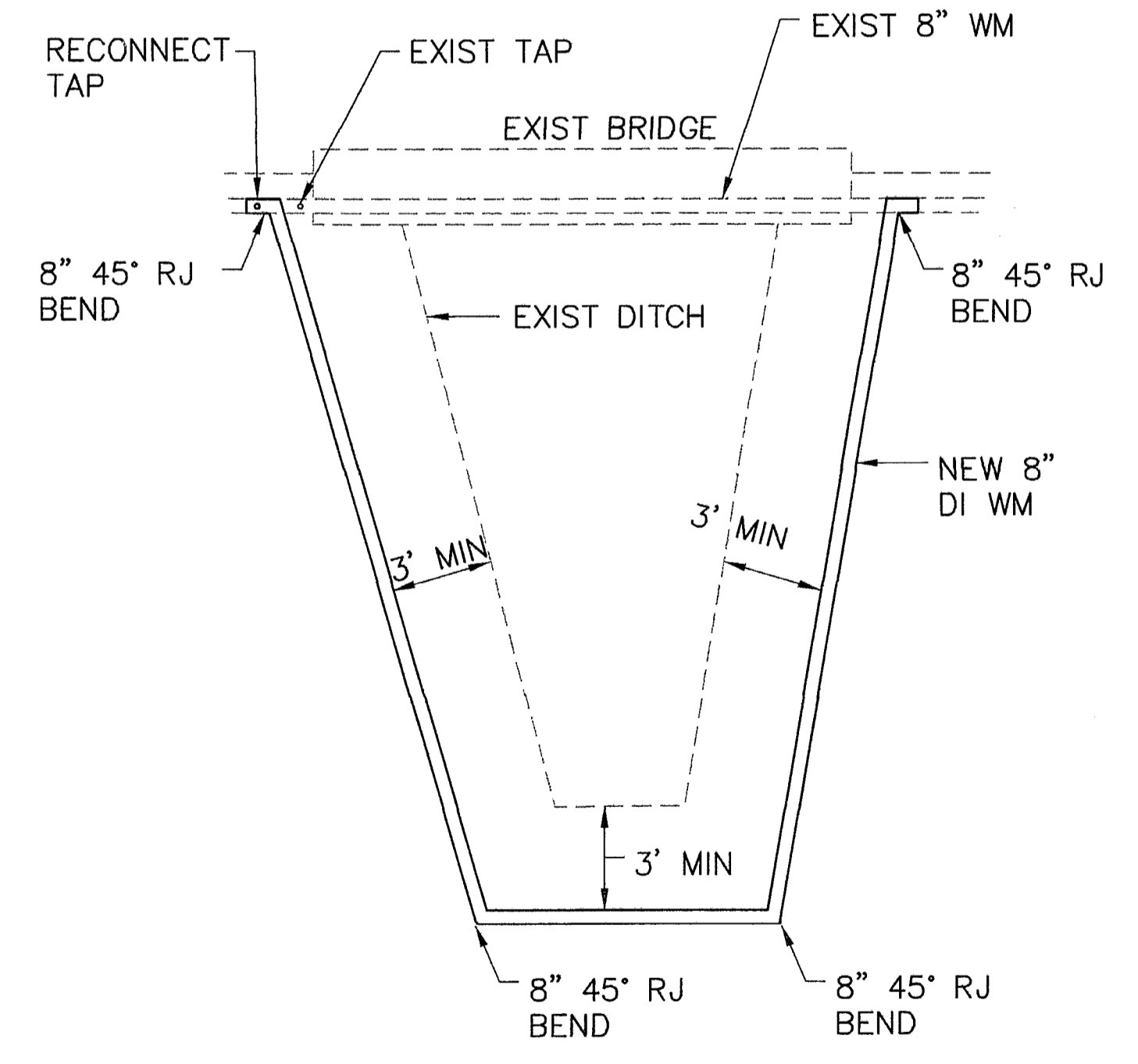
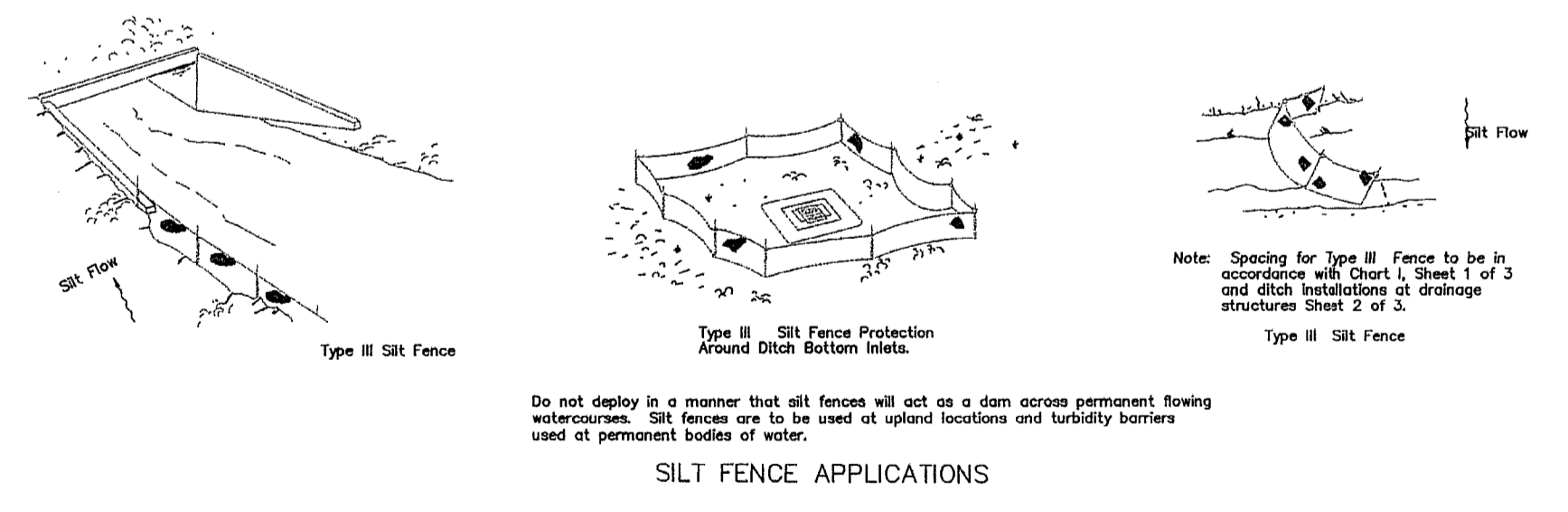
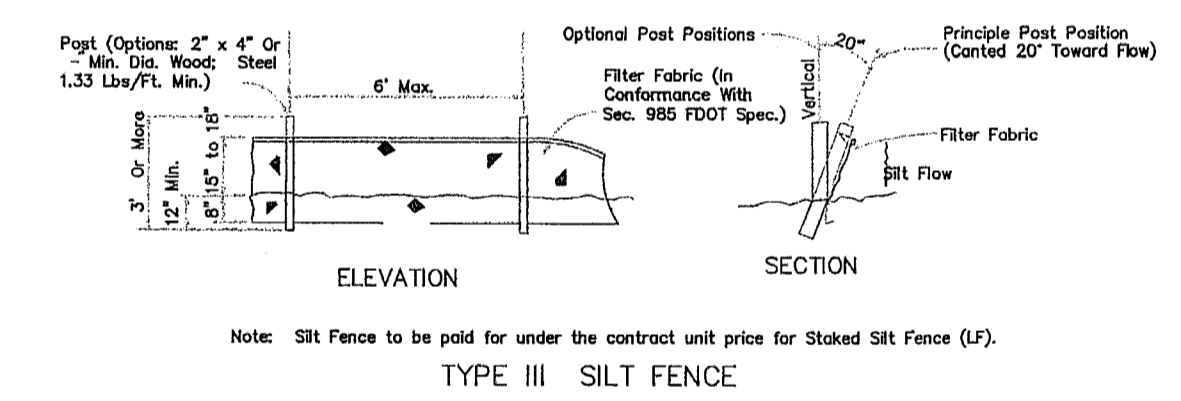
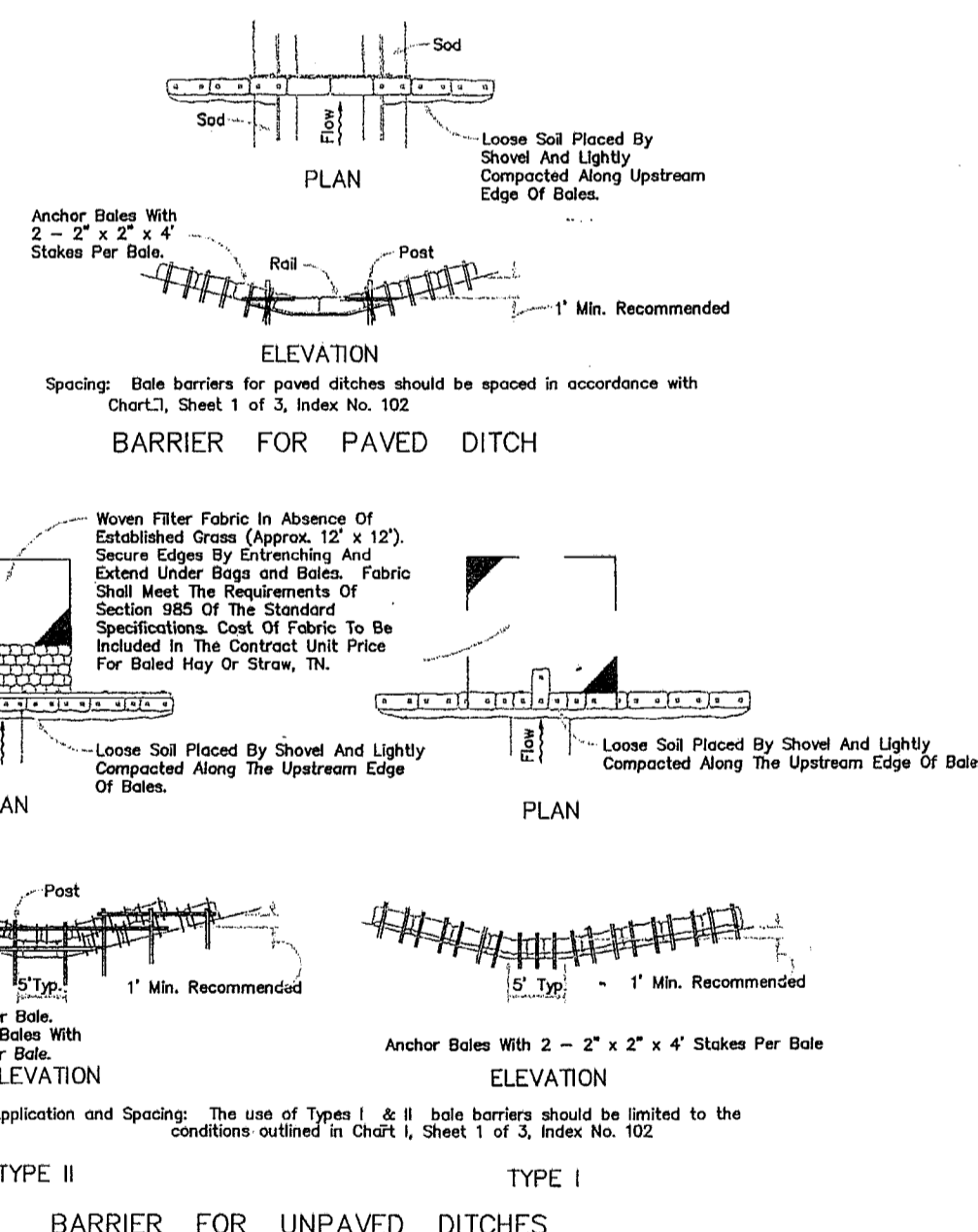
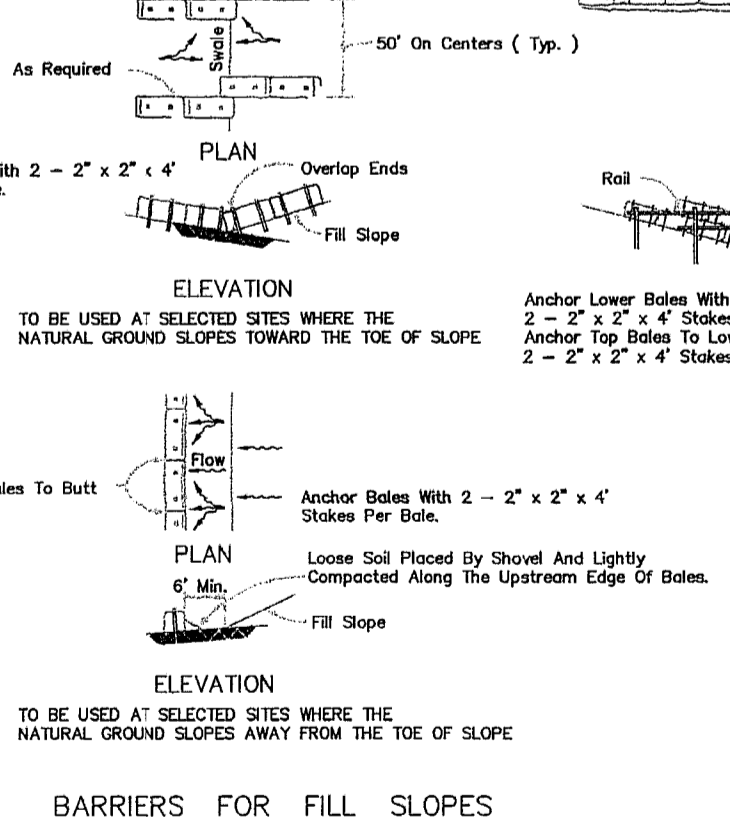
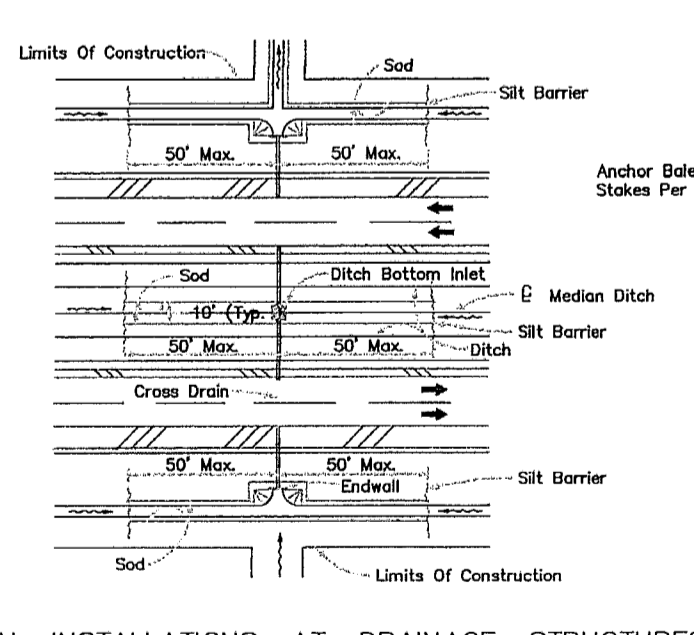
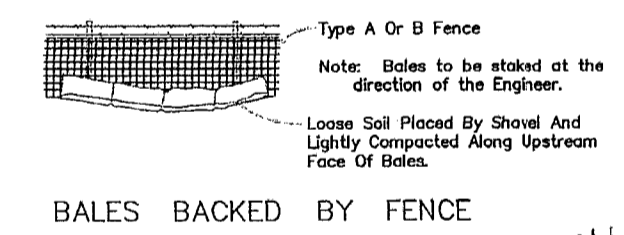
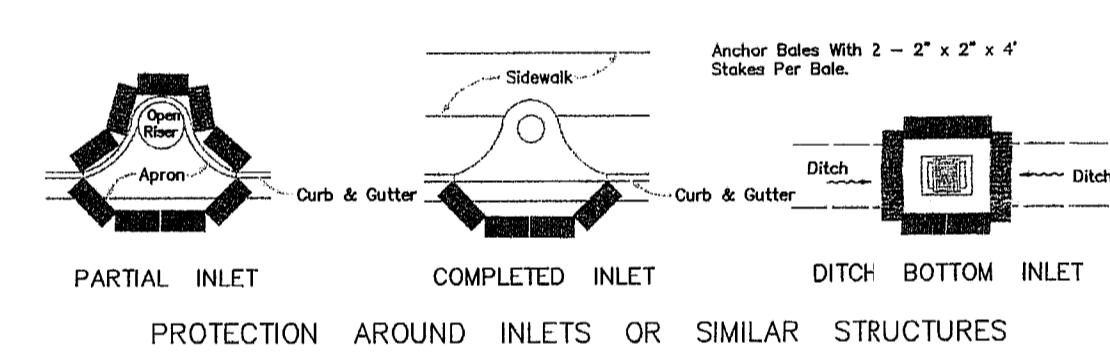
RELOCATE EXIST 6" WM
W/ 4 6" 45° RJ BENDS
AND 55 LF 6" DIP

NOTE: EXISTING 6, 8 &
10" FM'S ARE LEACHATE
FM'S FROM STAGE I AND
WILL NOT BE IMPACTED
BY THIS PROJECT

REMOVE EXISTING
CONCRETE SPILLWAY
AND FILL TO A MIN.
ELEV. OF 40.00

INSTALL 36" RC PIPE W/
MITERED END SECTIONS

EXCAVATE BOTTOM
TO EL 31.0



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 PH. (941) 954-4836

CLIENT **MANATEE COUNTY PROJECT MANAGEMENT DEPARTMENT**
 1026 26th AVENUE EAST
 BRADENTON, FLORIDA 34208

PROJECT **LENA ROAD LANDFILL STORMWATER SYSTEM IMPROVEMENTS**

TASK **STATION 107+26.16 TO 117+00**

ORIGINAL: JUNE, 03
 REVISIONS:
 1 ADDED NOTES & SLURRY WALL
 2 SEPTEMBER 05-FDEP COMMENTS
 3
 4
 5

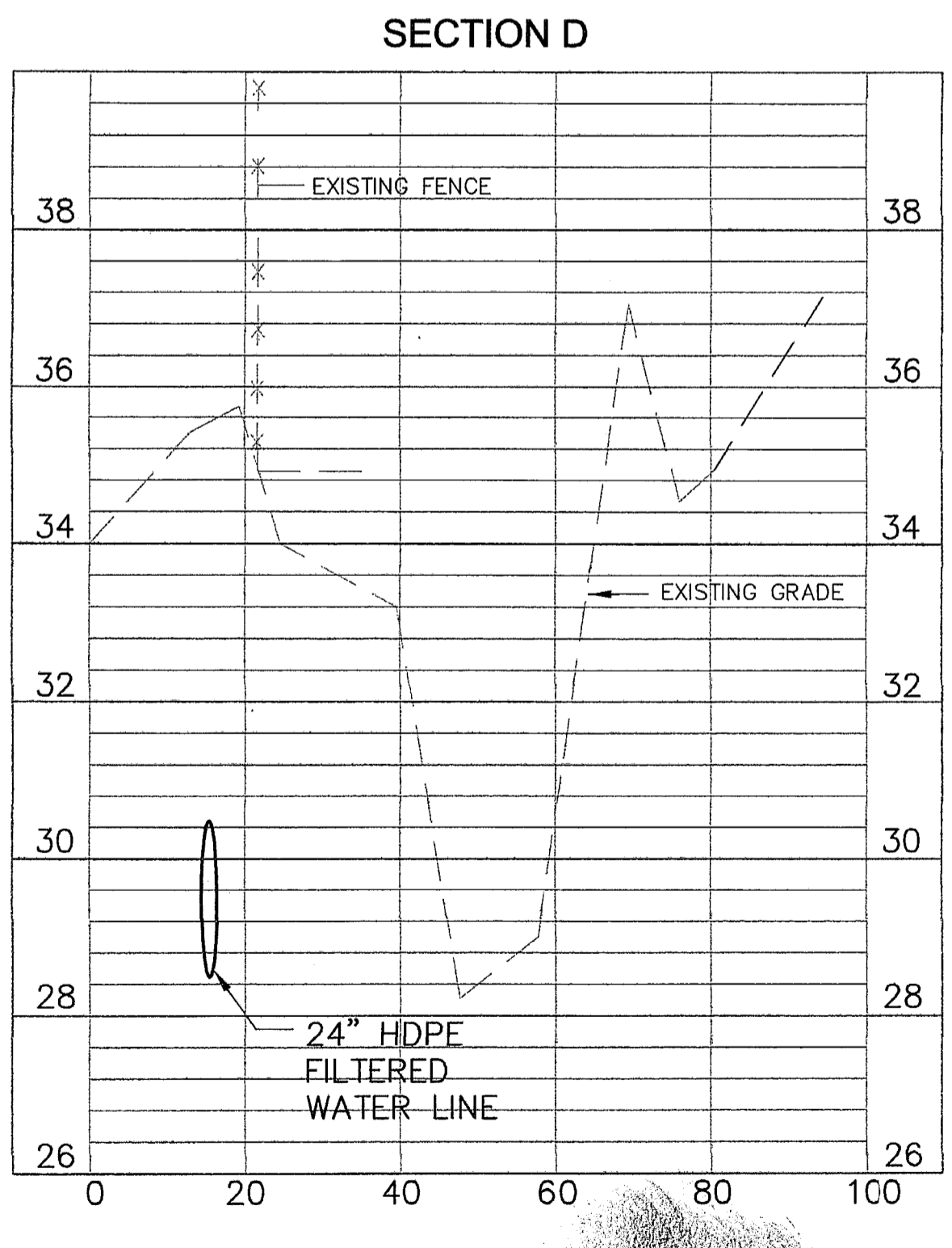
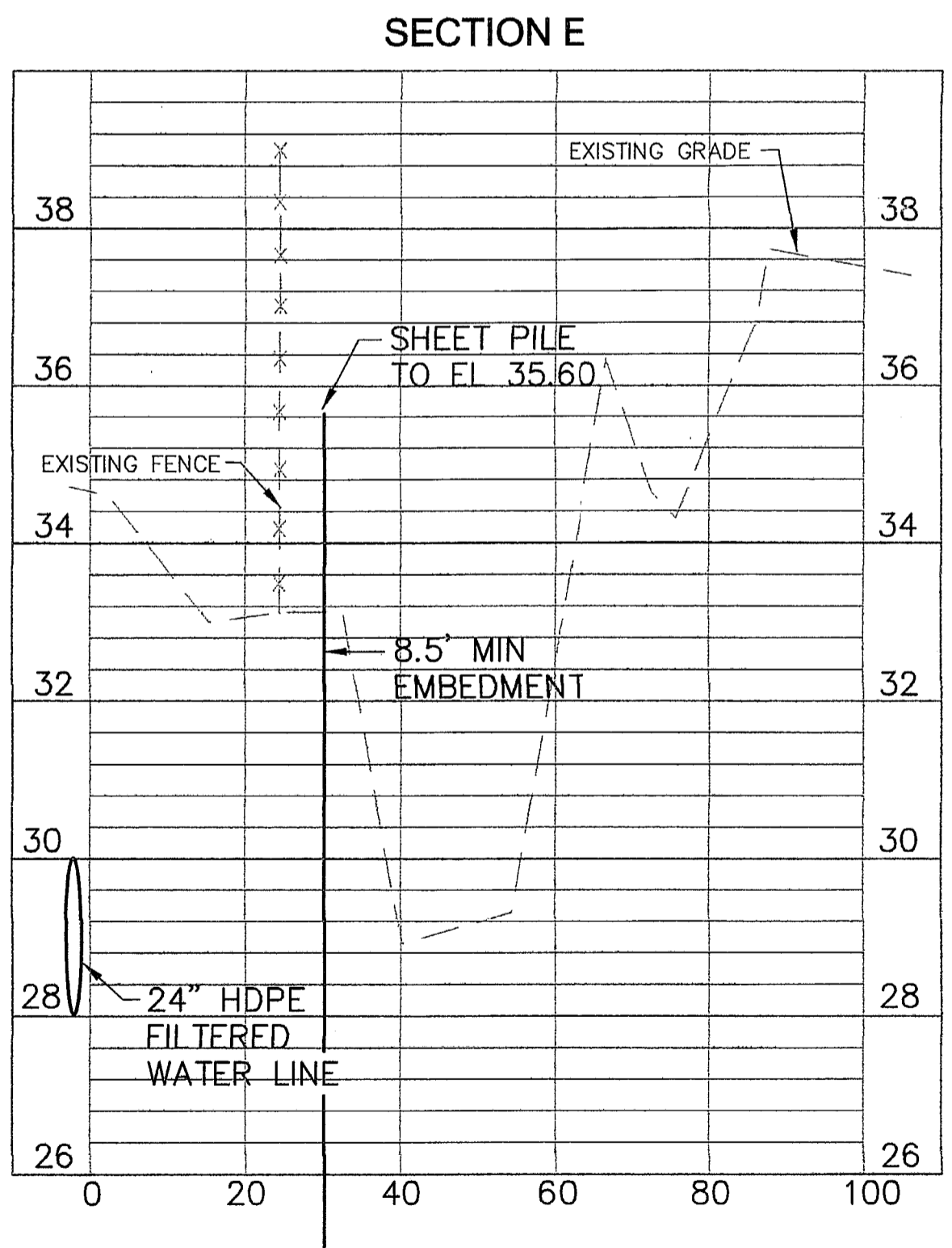
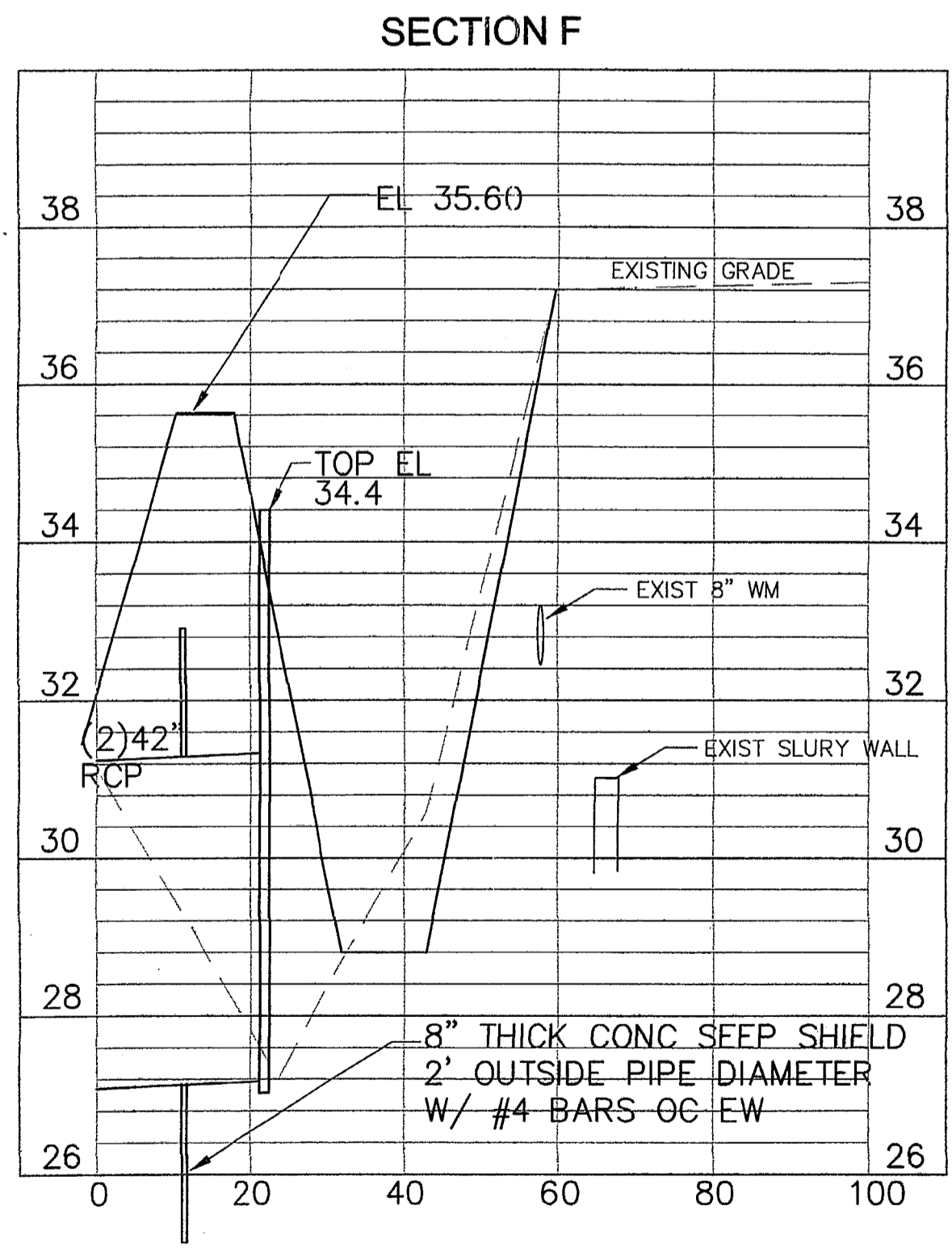
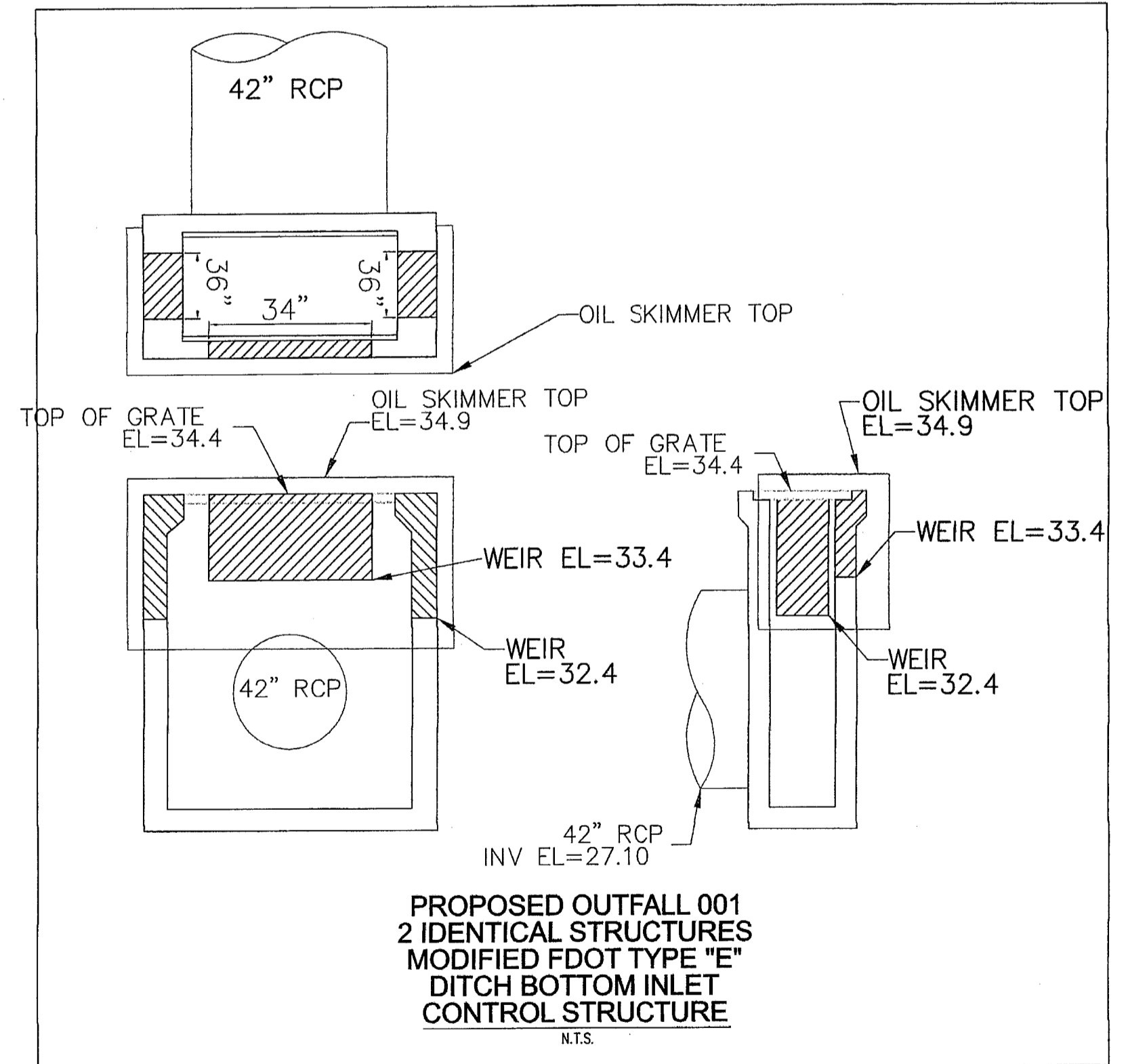
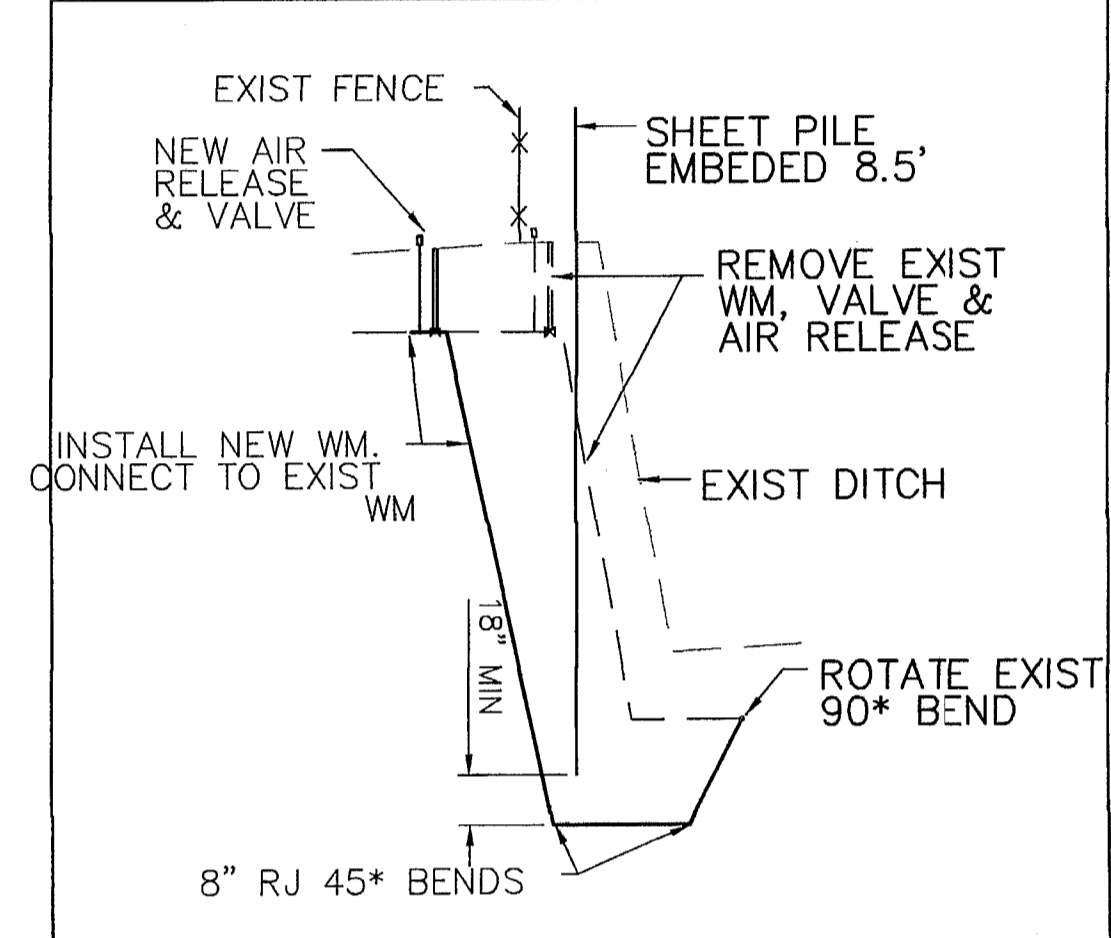
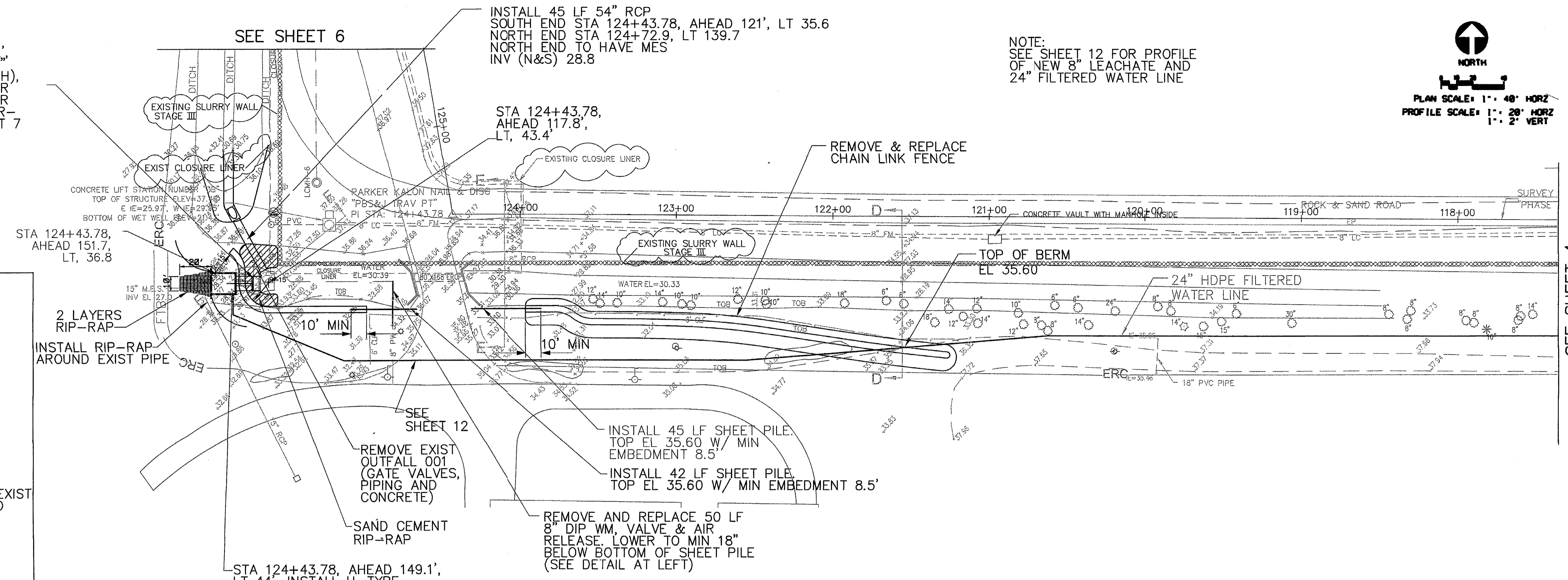
ENGINEER: [Signature]
 REG. NO. 120507.10
 JOB NO. 120507.10
 DRAWN: JAS
 DESIGNED: JME
 CHECKED: JME
 GC: DAW
 SHEET 4

NORTH
 PLAN SCALE: 1" = 40' HORZ
 PROFILE SCALE: 1" = 2' VERT

STA 124+43.78, AHEAD 142.2',
 LT 37'. INSTALL 2 TYPE "E"
 AND 2 42" RCP 12LF (EACH),
 TOP EL=34.4 INV EL=27.1, WEIR
 EL=32.4 (2, 36" WEIR), WEIR
 EL=33.4 (34" WEIR) SKIMMER-
 SEE, DETAIL SHEET 7

INSTALL 45 LF 54" RCP
 SOUTH END STA 124+43.78, AHEAD 121', LT 35.6
 NORTH END STA 124+72.9, LT 139.7
 NORTH END TO HAVE MES
 INV (N&S) 28.8

NOTE:
 SEE SHEET 12 FOR PROFILE
 OF NEW 8" LEACHATE AND
 24" FILTERED WATER LINE



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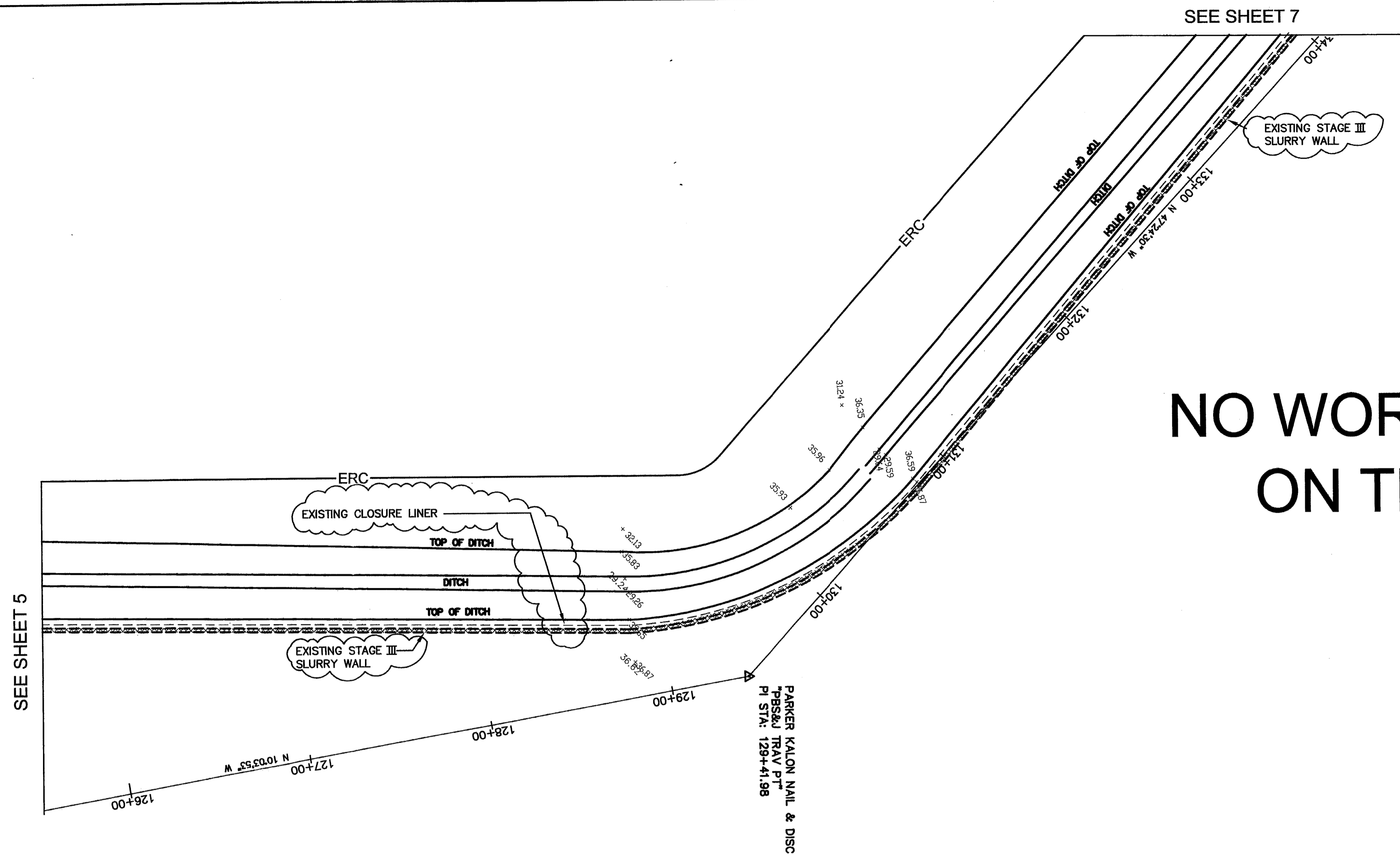
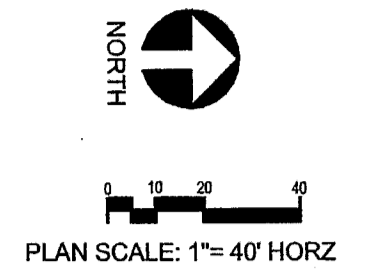
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 BRADENTON, FLORIDA 34208

PROJECT
LENA ROAD LANDFILL STORMWATER SYSTEM IMPROVEMENTS

TASK
STATION 117+00 TO 125+50 & CROSS SECTIONS D, E & F

ORIGINAL: JUNE, 03
 REVISIONS:
 1 SEPTEMBER, 04-FDEP COMMENTS
 2 SEPTEMBER, 05-FDEP COMMENTS

ENGINEER: [Signature]
 DESIGNER: JME
 CHECKED: JME
 QC: DAW
 SHEET 5



NO WORK PROPOSED ON THIS SHEET

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PROJECT
**LENA ROAD LANDFILL
 STORMWATER SYSTEM IMPROVEMENTS**

TASK
STATION 126+50 TO 134+00

ORIGINAL: JUNE, 03

REVISIONS:

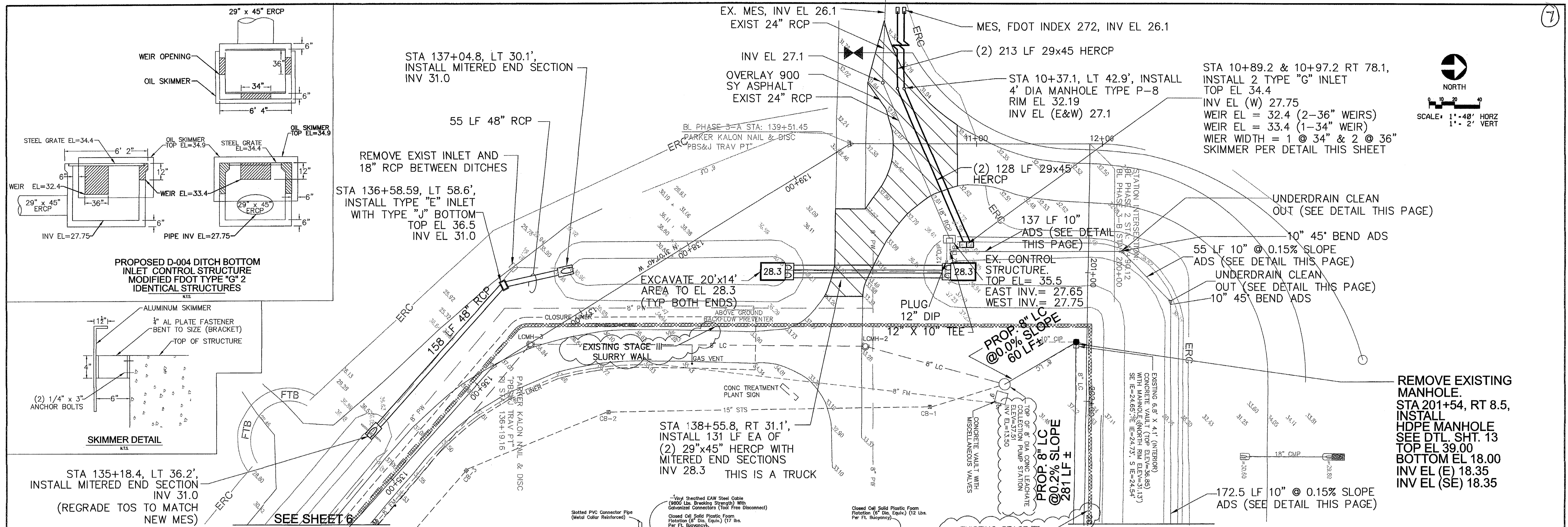
| | |
|---|-----------------------------|
| 1 | SEPTEMBER, 04-FDEP COMMENTS |
| 2 | SEPTEMBER, 05-FDEP COMMENTS |
| 3 | |
| 4 | |
| 5 | |
| 6 | |

ENGINEER: [Signature]
 REG. No. 1, [Signature]
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

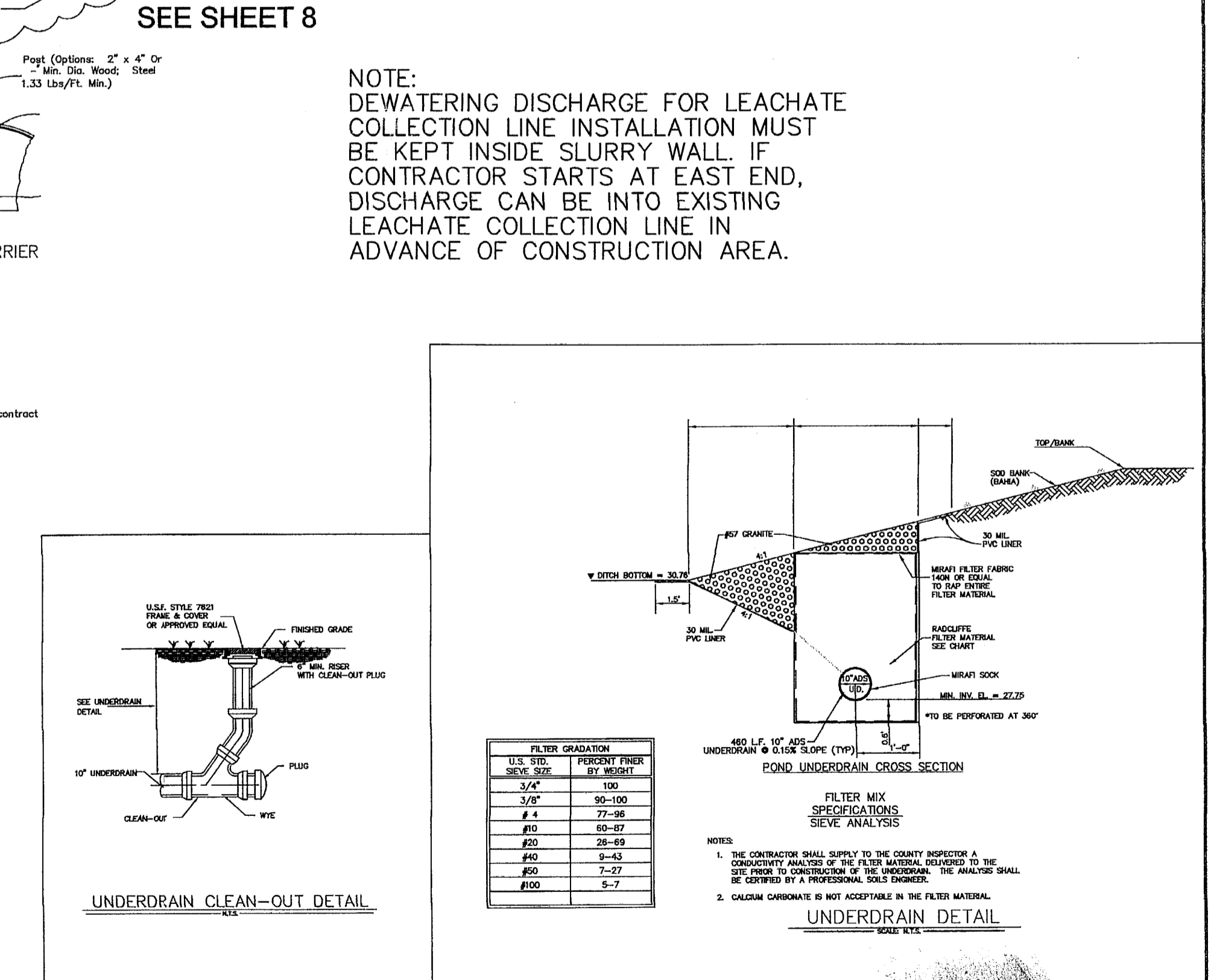
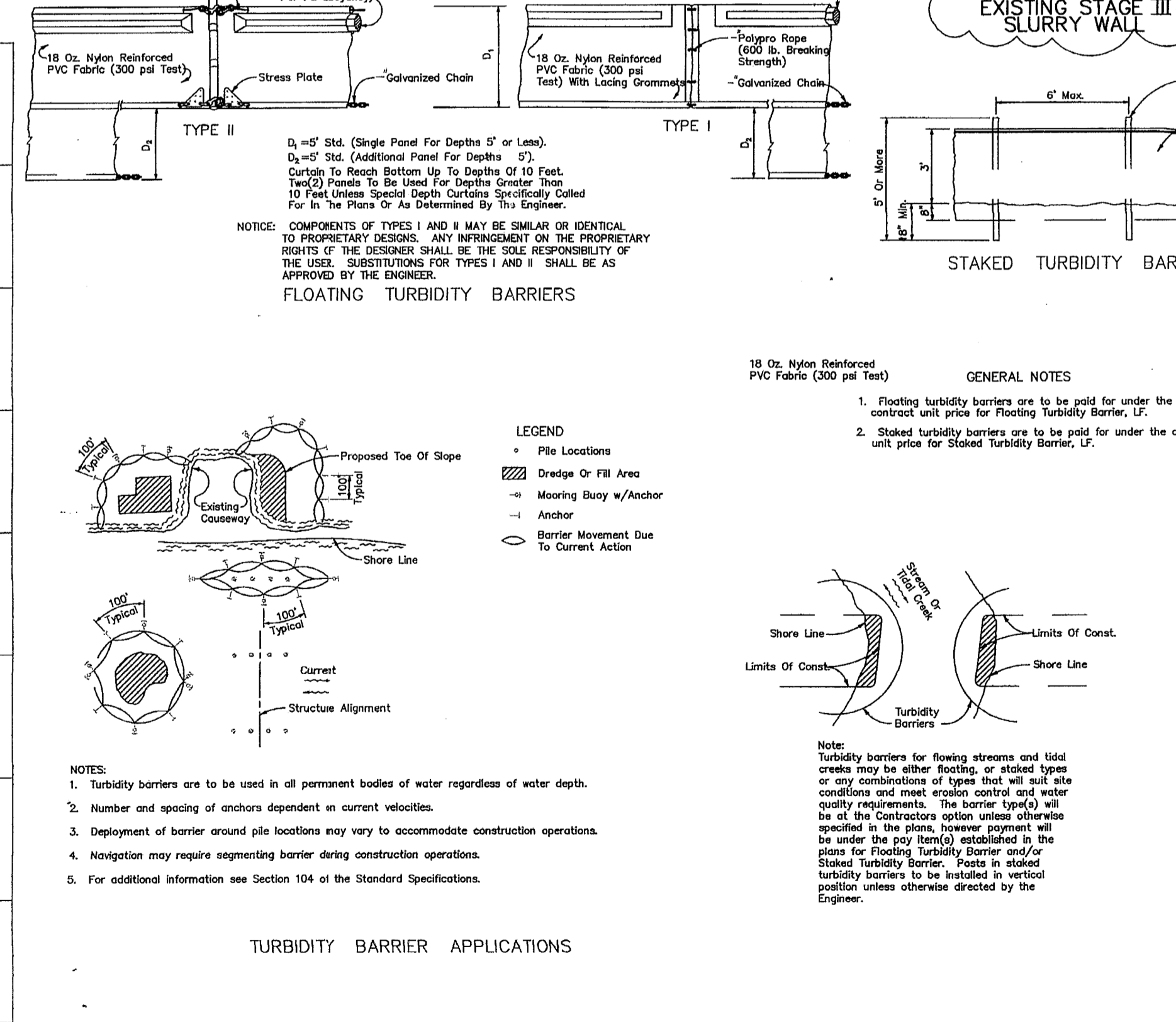
JOB NO. 120907-10

| | |
|----------|-----|
| DRAWN | JAS |
| DESIGNED | JME |
| CHECKED | JME |
| QC | DAW |

SHEET 6



| Station | Description | Notes |
|---------|---|-------|
| 200+00 | HDPE MANHOLE RIM EL = 39.0 | |
| 201+00 | INSTALL PROP. HDPE MANHOLE SEE DTL. SHT. 13 | |
| 201+54 | REMOVE EXISTING MANHOLE. | |
| 202+00 | REMOVE EXISTING 8\"/> | |
| 203+00 | REMOVE EXISTING AND GROUT SEAL | |
| 203+00 | CORE DRILL WALL INV. EL. 18.35 | |



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 BRADENTON, FLORIDA 34208

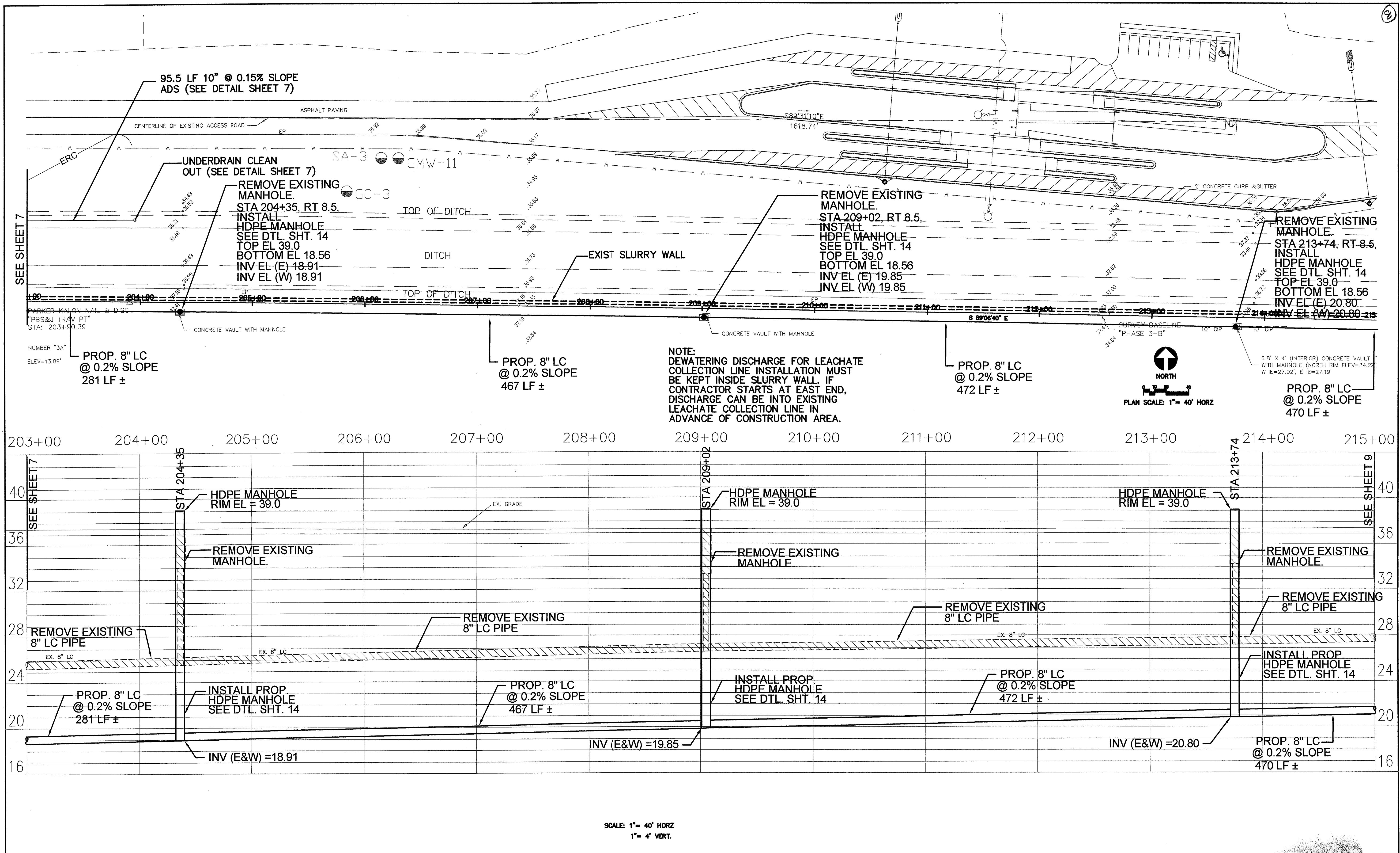
PROJECT
LENA ROAD LANDFILL STORMWATER SYSTEM IMPROVEMENTS

TASK
 STATION 134+00 TO 139+51.45
 STATION 10+00 TO 11+90.12
 STATION 200+00 TO 203+00

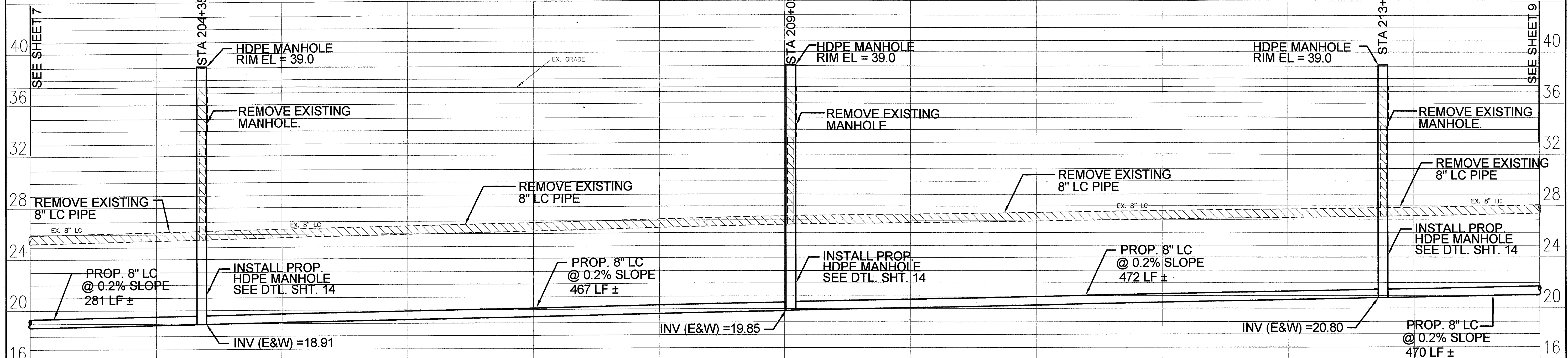
ORIGINAL: JUNE, 03
 REVISIONS:
 1. NOTES & ADDED SLURRY WALL
 2. SEPTEMBER 05-FOEP COMMENTS
 3.
 4.
 5.

ENGINEER
JAMES J. MESSING
 LICENSE NO. 120507.18
 JOB NO. 120507.18
 DRAWN: JAS
 DESIGNED: JME
 CHECKED: JME
 OC: DAW
 SHEET 7

SEP 20 2005
 Southwest District Tampa



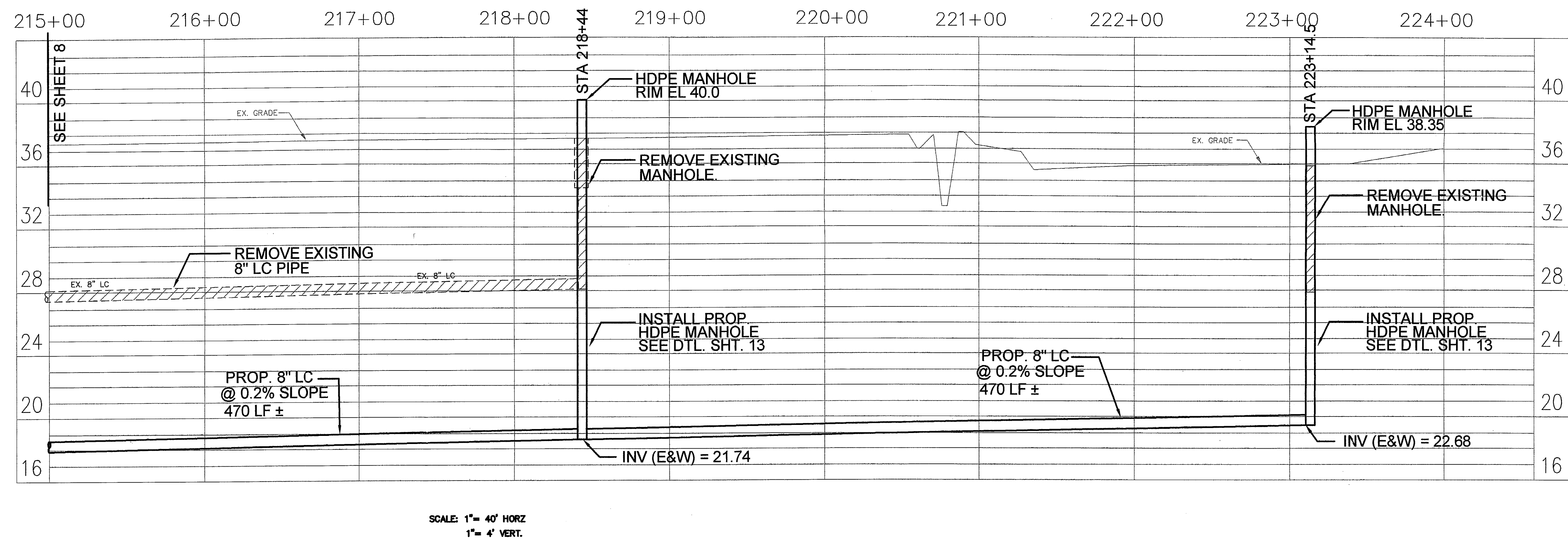
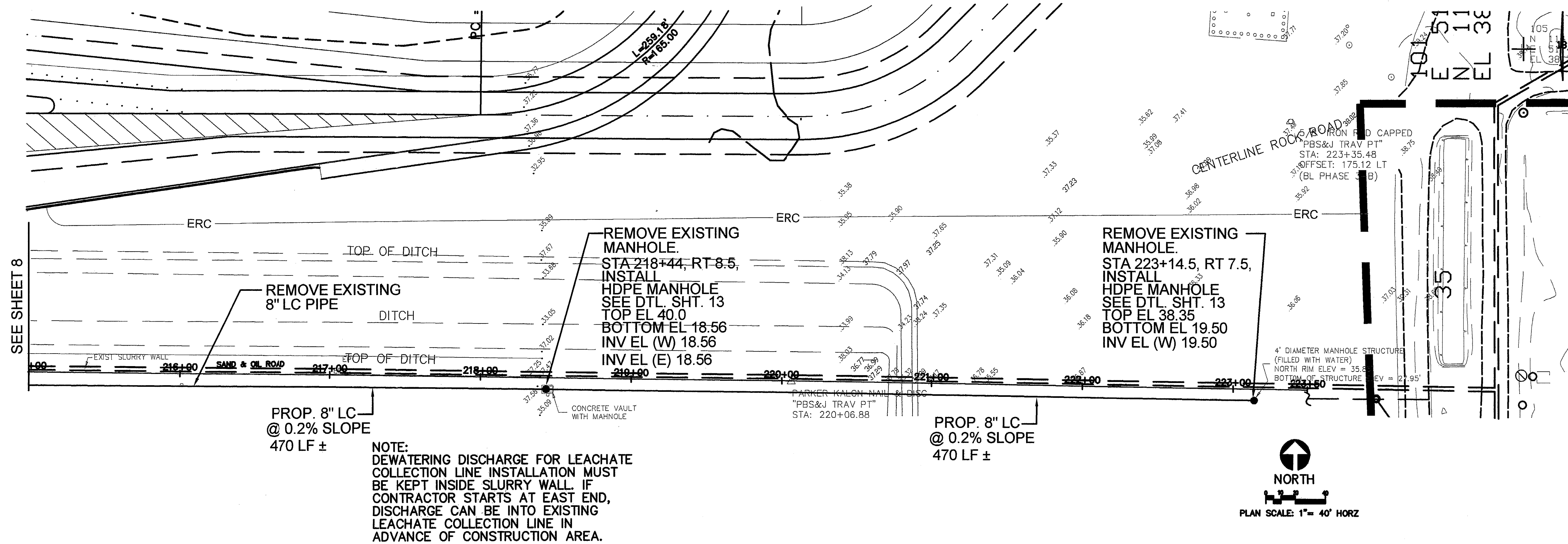
203+00 204+00 205+00 206+00 207+00 208+00 209+00 210+00 211+00 212+00 213+00 214+00 215+00



SCALE: 1" = 40' HORZ
1" = 4' VERT.

| | | | | | | |
|--|---|--|--------------------------|-------------------------------------|-------------------------|-------------------|
| <p>POST, BUCKLEY, SCHUH & JERNIGAN, INC. D/B/A/ PRINCIPAL ADDRESS: 2001 NW 107th AVENUE MIAMI, FL 33172-2507 FBPR CERT. OF AUTH. No. 24 PRODUCTION ADDRESS: 2803 FRUITVILLE ROAD, STE 130 SARASOTA, FLORIDA 34237 Ph. (844) 954-4036</p> | <p>CLIENT MANATEE COUNTY PROJECT MANAGEMENT DEPARTMENT 1026 26th AVENUE EAST BRADENTON, FLORIDA 34208</p> | PROJECT | TASK | ORIGINAL: JUNE, 03 | ENGINEER: JAMES W. EAST | JOB NO. 120507.10 |
| | | LENA ROAD LANDFILL STORMWATER SYSTEM IMPROVEMENTS | STATION 203+00 TO 215+00 | 1 ADDED RIM, INV EL'S & SLURRY WALL | DESIGNED: JME | DRAWN: JAS |
| | | | | | SHEET 8 | |

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Southwest District Tampa



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 SARASOTA, FLORIDA 34237
 Ph. (941) 554-4036

CLIENT
 MANATEE COUNTY
 PROJECT MANAGEMENT
 DEPARTMENT
 1026 26th AVENUE EAST
 BRADENTON, FLORIDA 34208



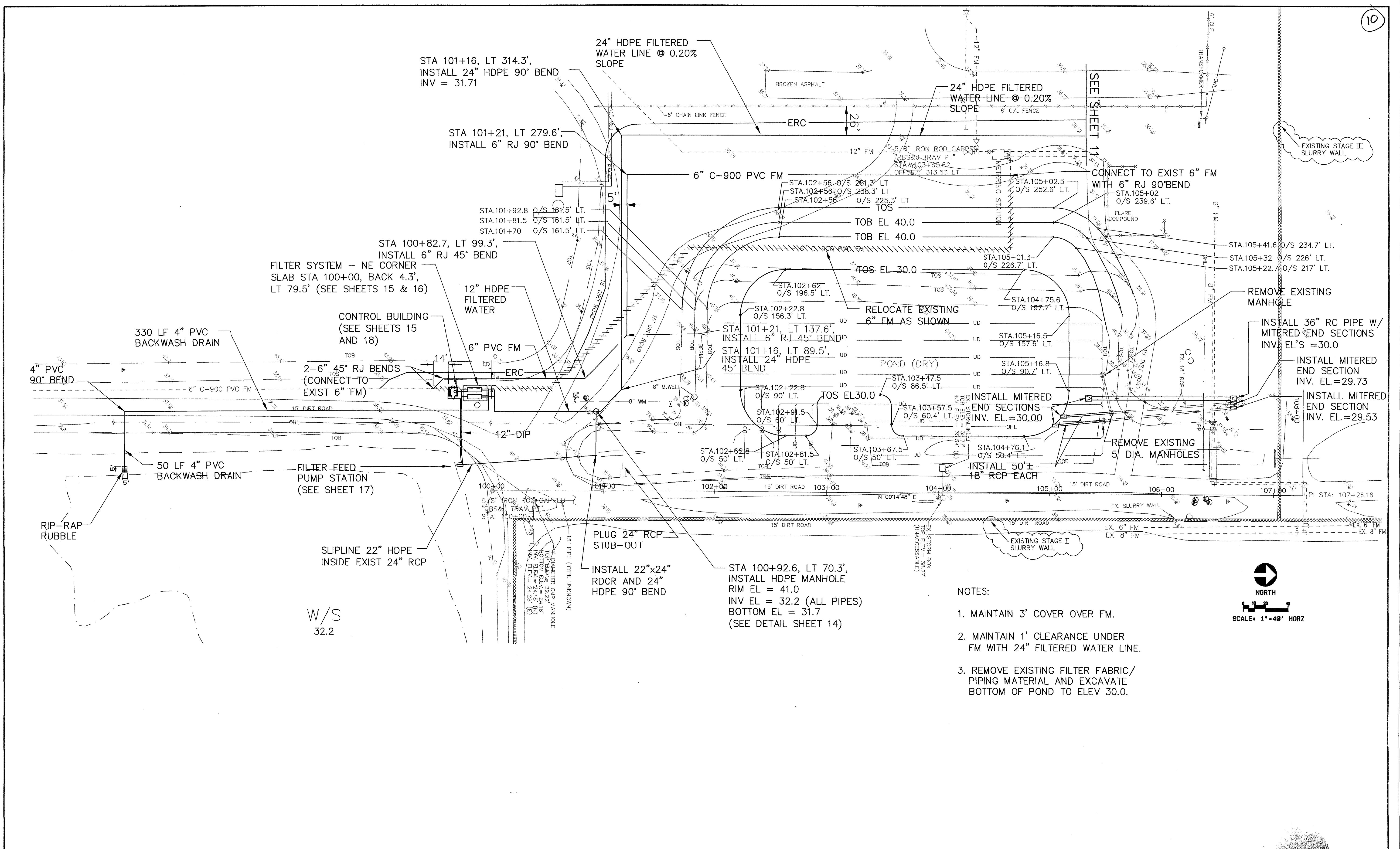
PROJECT
 LENA ROAD LANDFILL
 STORMWATER SYSTEM IMPROVEMENTS

TASK
 STATION 215+00 TO 221+00

ORIGINAL: JUNE, 03
 REVISIONS:
 1 ADDED RIM & INV ELEV'S
 2
 3
 4
 5

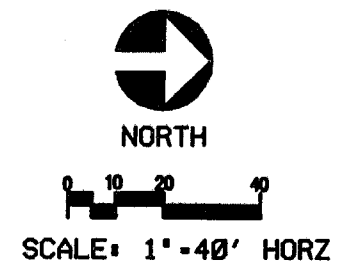
ENGINEER: [Signature]
 REG. NO. [Number]
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

JOB NO. 120507.10
 DRAWN: JAS
 DESIGNED: JME
 CHECKED: JME
 QC: DAW
 SHEET 9

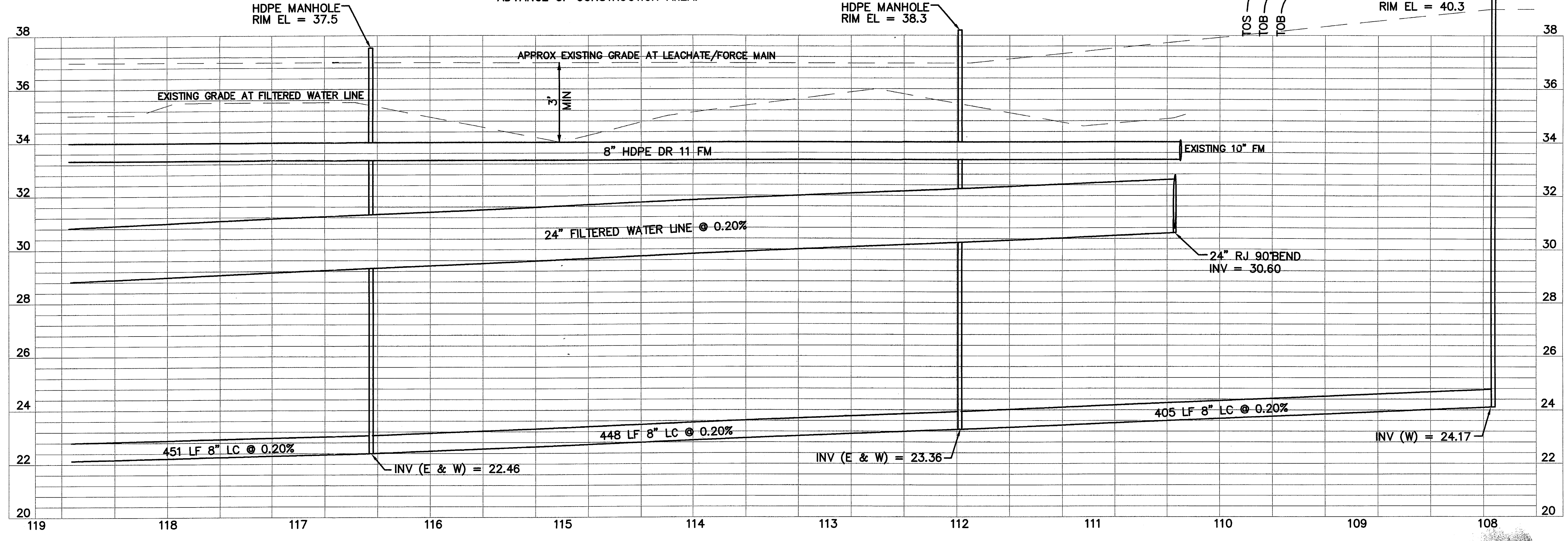
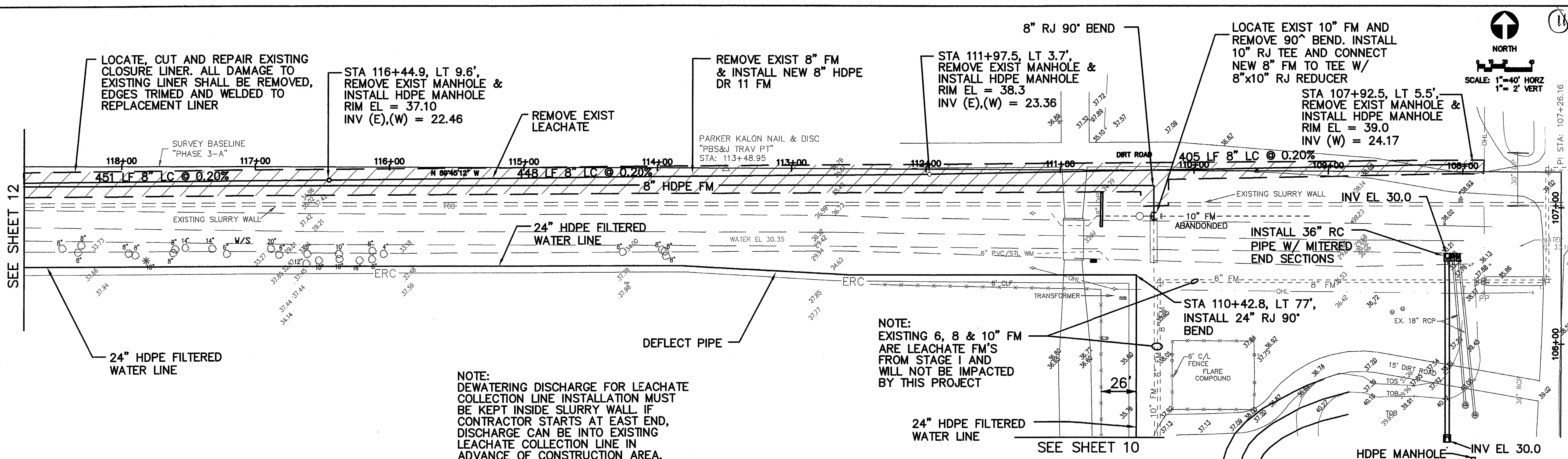


NOTES:

1. MAINTAIN 3' COVER OVER FM.
2. MAINTAIN 1' CLEARANCE UNDER FM WITH 24" FILTERED WATER LINE.
3. REMOVE EXISTING FILTER FABRIC/ PIPING MATERIAL AND EXCAVATE BOTTOM OF POND TO ELEV 30.0.



| | | | | | |
|--|--|--|--|--|-----------------------------------|
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| | | | | REVISIONS: 1 ADDED SLURRY WALL, NOTES 2 SEPTEMBER 05, FDEP COMMENTS 3 4 5 | |



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 SARASOTA, FLORIDA 34237
 Ph. (941) 554-4036

CLIENT
 MANATEE COUNTY
 PROJECT MANAGEMENT
 DEPARTMENT
 1026 26th AVENUE EAST
 BRADENTON, FLORIDA 34208

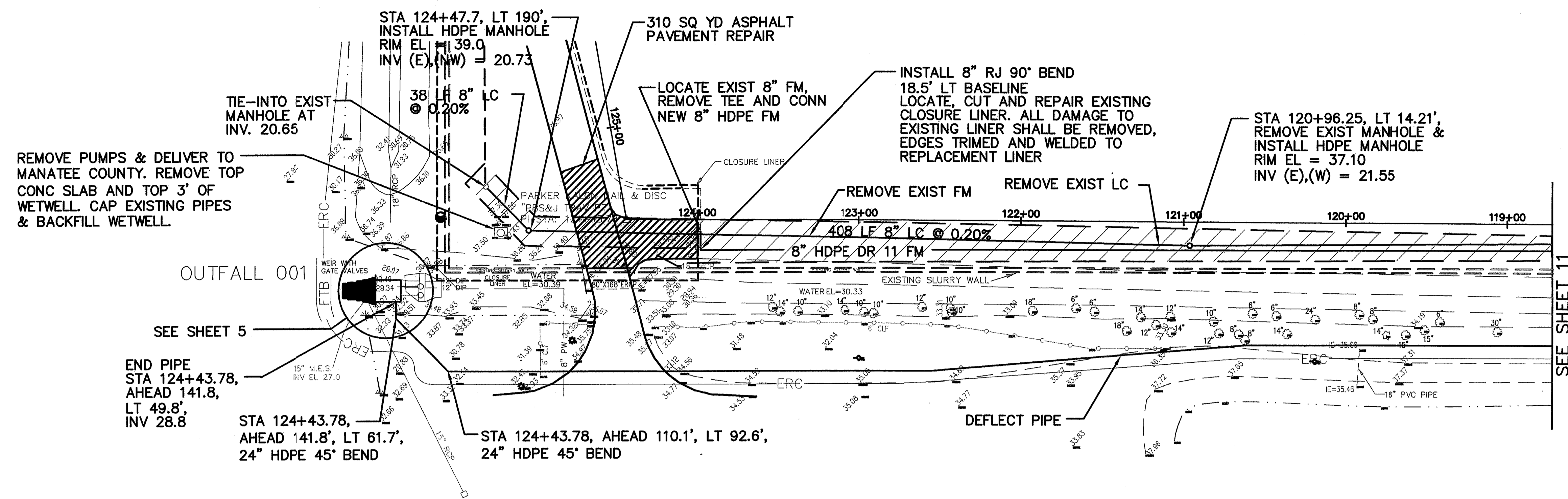
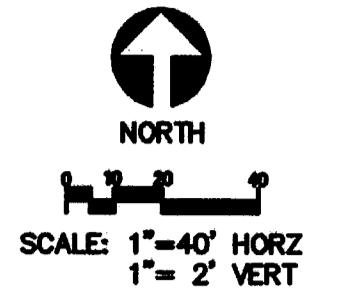
PROJECT
 LENA ROAD LANDFILL
 STORMWATER SYSTEM IMPROVEMENTS

TASK
 FILTERED WATER LINE, LEACHATE
 COLLECTION AND FM
 PLAN AND PROFILE

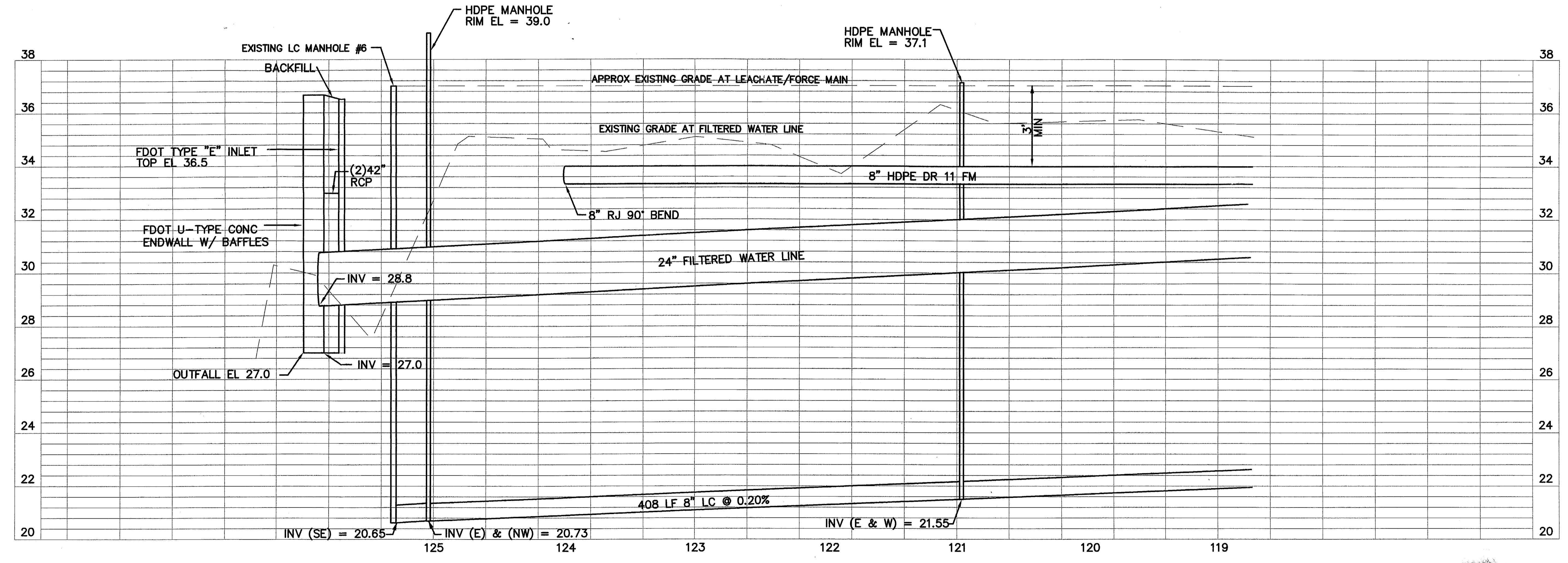
ORIGINAL: APRIL, 03
 REVISIONS:
 1. ADDED INVERTS & ELEVATIONS
 2.
 3.
 4.
 5.

ENGINEER: JAS
 REG. No. 120507-10
 DESIGNER: JME
 CHECKED: JME
 QC: DAW
 SHEET 11

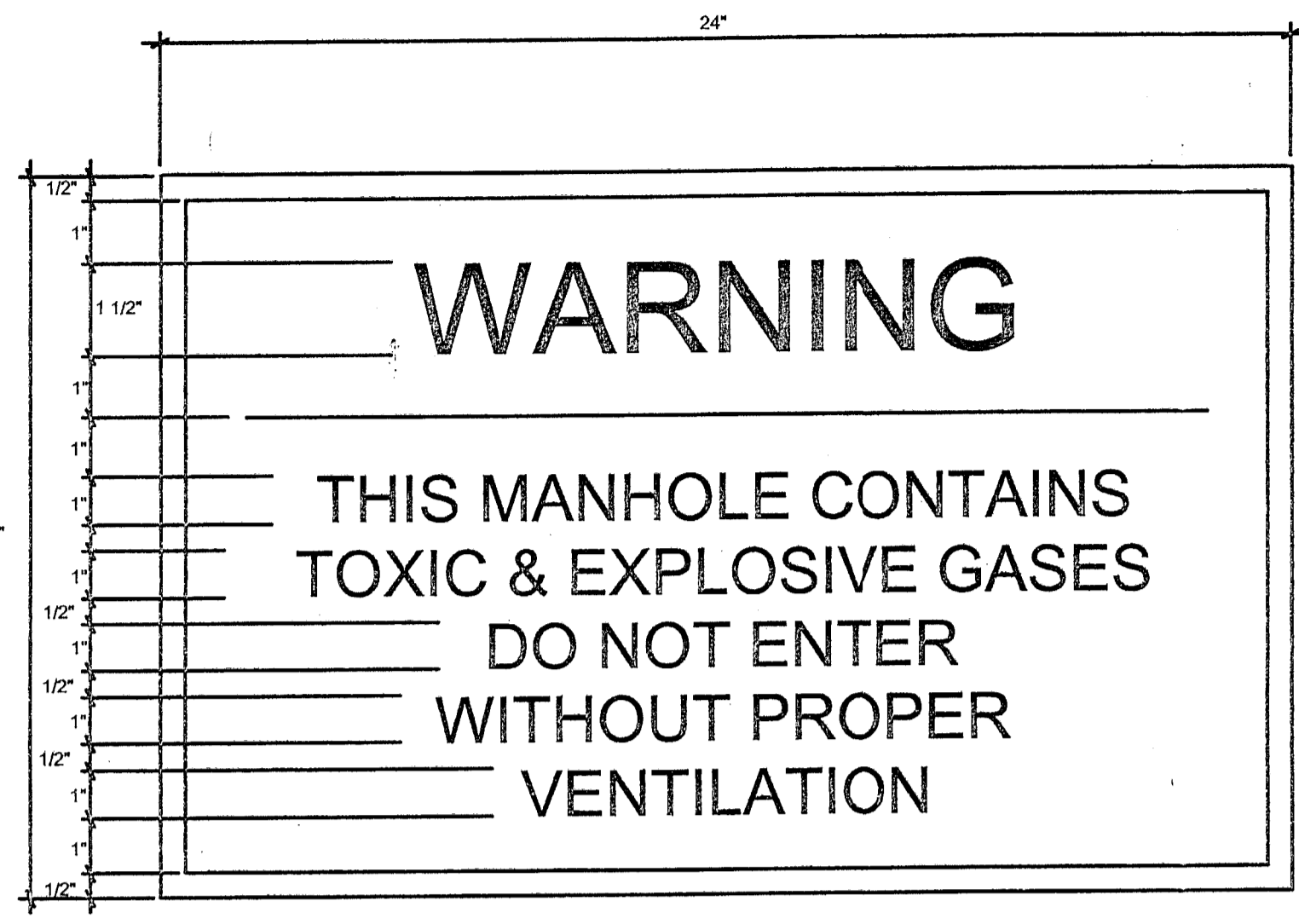
D.E.P.
 SEP 20 2005
 Southwest District Tampa



NOTE:
DEWATERING DISCHARGE FOR LEACHATE COLLECTION LINE INSTALLATION MUST BE KEPT INSIDE SLURRY WALL. IF CONTRACTOR STARTS AT EAST END, DISCHARGE CAN BE INTO EXISTING LEACHATE COLLECTION LINE IN ADVANCE OF CONSTRUCTION AREA.

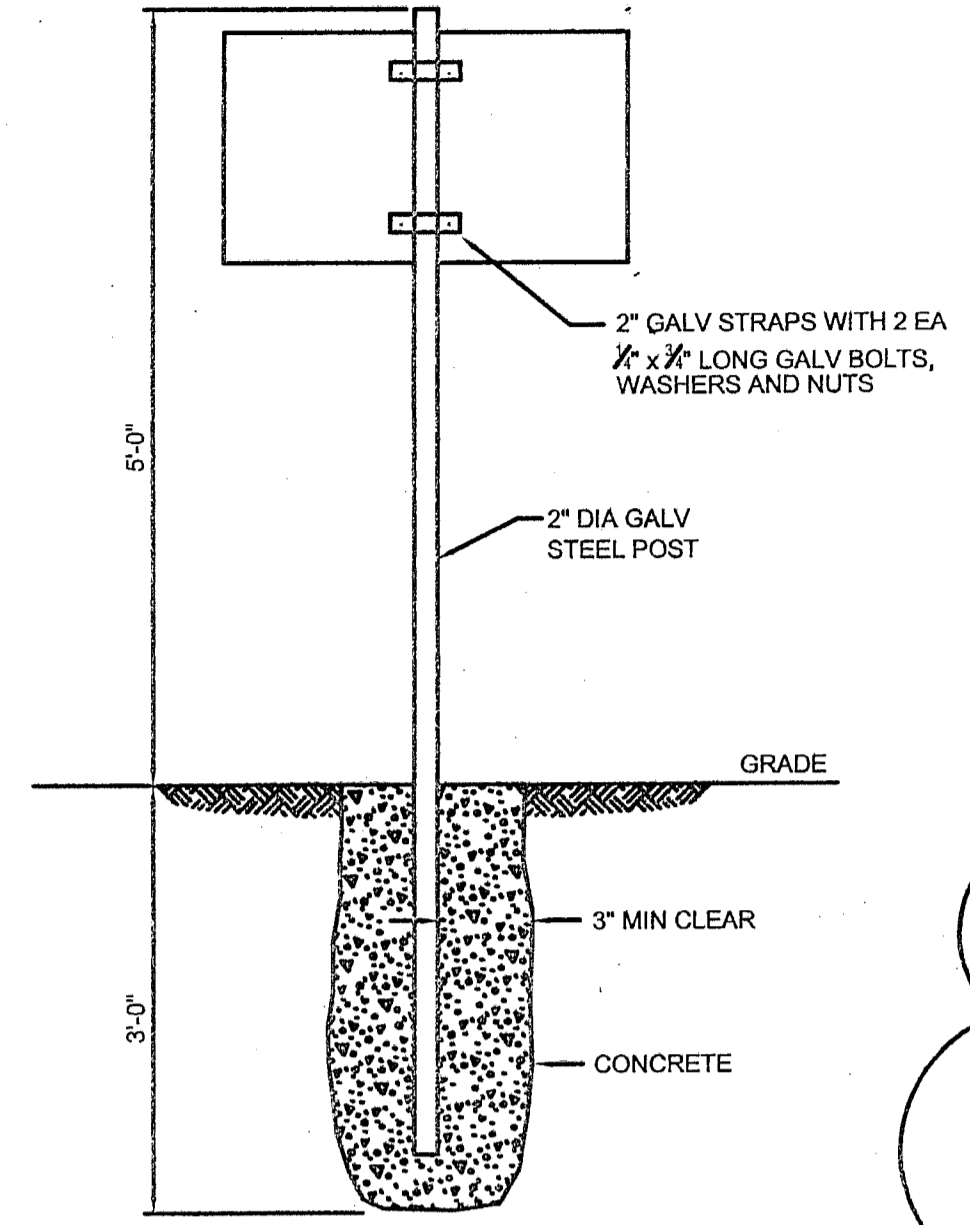


| | | | | | |
|---|---|---|---|----------------------------------|--|
| <p>POST, BUCKLEY, SCHUH & JERNIGAN, INC., D/B/A/ PRINCIPAL ADDRESS: 2001 NW 107th AVENUE MIAMI, FL 33172-2507 FBPR CERT. OF AUTH. No. 24 PRODUCTION ADDRESS: 2803 FRUITVILLE ROAD, STE 130 SARASOTA, FLORIDA 34237 Ph. (941) 954-4036</p> | <p>CLIENT MANATEE COUNTY PROJECT MANAGEMENT DEPARTMENT 1026 26th AVENUE EAST BRADENTON, FLORIDA 34208</p> | <p>PROJECT LENA ROAD LANDFILL STORMWATER SYSTEM IMPROVEMENTS</p> | <p>TASK FILTERED WATER LINE, LEACHATE COLLECTION AND FM PLAN AND PROFILE</p> | ORIGINAL: APRIL_03 REVISIONS: | <p>JOB NO. 120507.10 DRAWN: JAS DESIGNED: JME CHECKED: JME QC: DAW SHEET 12</p> |
| | | | | 1 | |
| | | | | 2 | |
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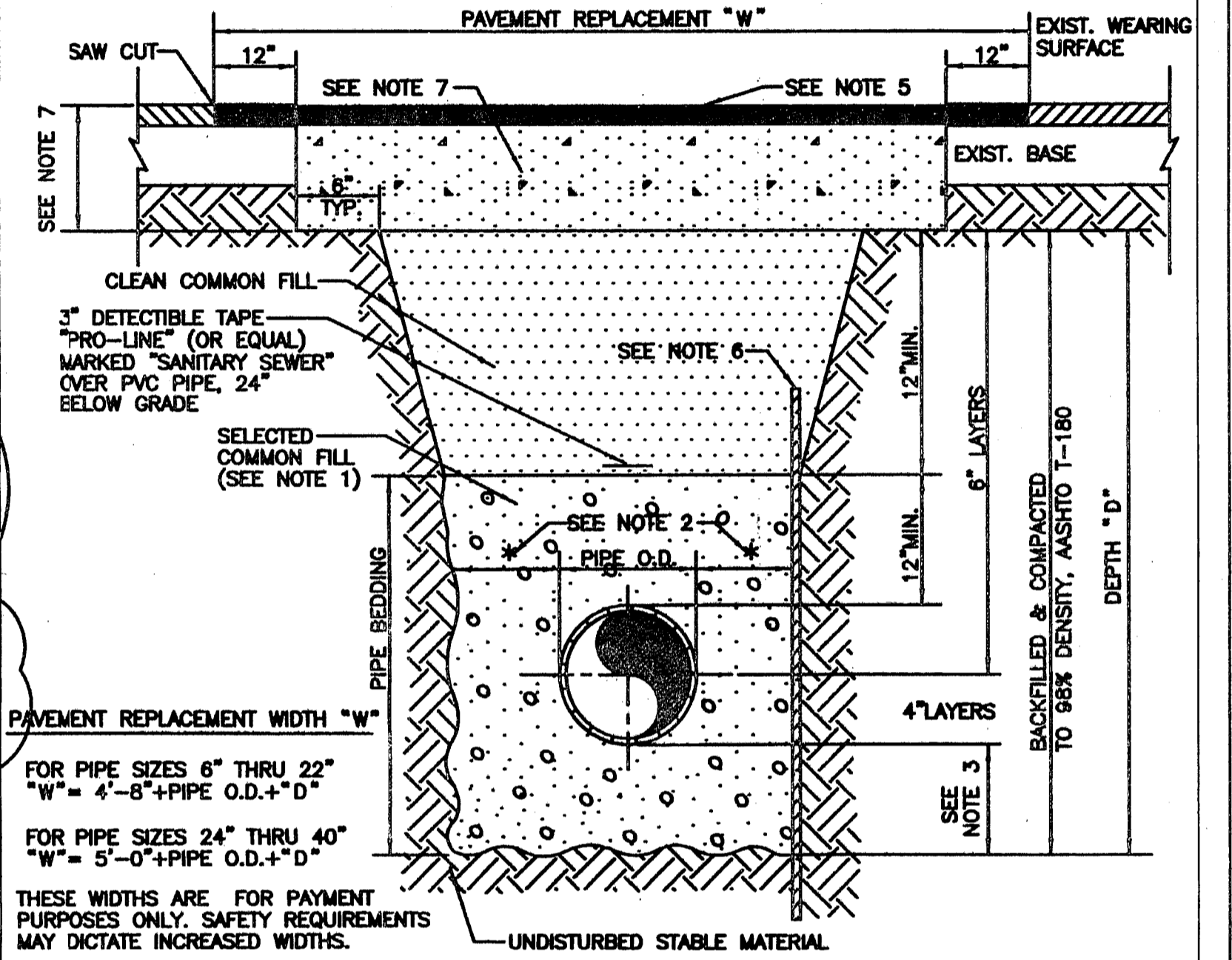
- NOTES:
1. THE COLOR OF THE SIGN SHALL BE HIGH INTENSITY SILVER-WHITE REFLECTORIZED BACKGROUND WITH RED OPAQUE BORDER AND LEGEND. SIGN PANEL SHALL BE 0.08" MIN THICK ALUMINUM. PANELS ARE TO BE DEGREASED, ETCHED, NEUTRALIZED AND TREATED WITH ALODINE 1200, IRIDINE 14-2, BONDERITE 721 OR EQUAL. NO STENCILING PERMITTED ON PANELS.
 2. REMOVE AND RESET EXISTING SIGNS AS AVAILABLE.
 3. INSTALL NEW SIGNS (ONE PER MANHOLE) AS REQUIRED.
 4. ALL SIGNS TO BE INSTALLED PER DETAIL.

MANHOLE SIGN DETAIL
NTS

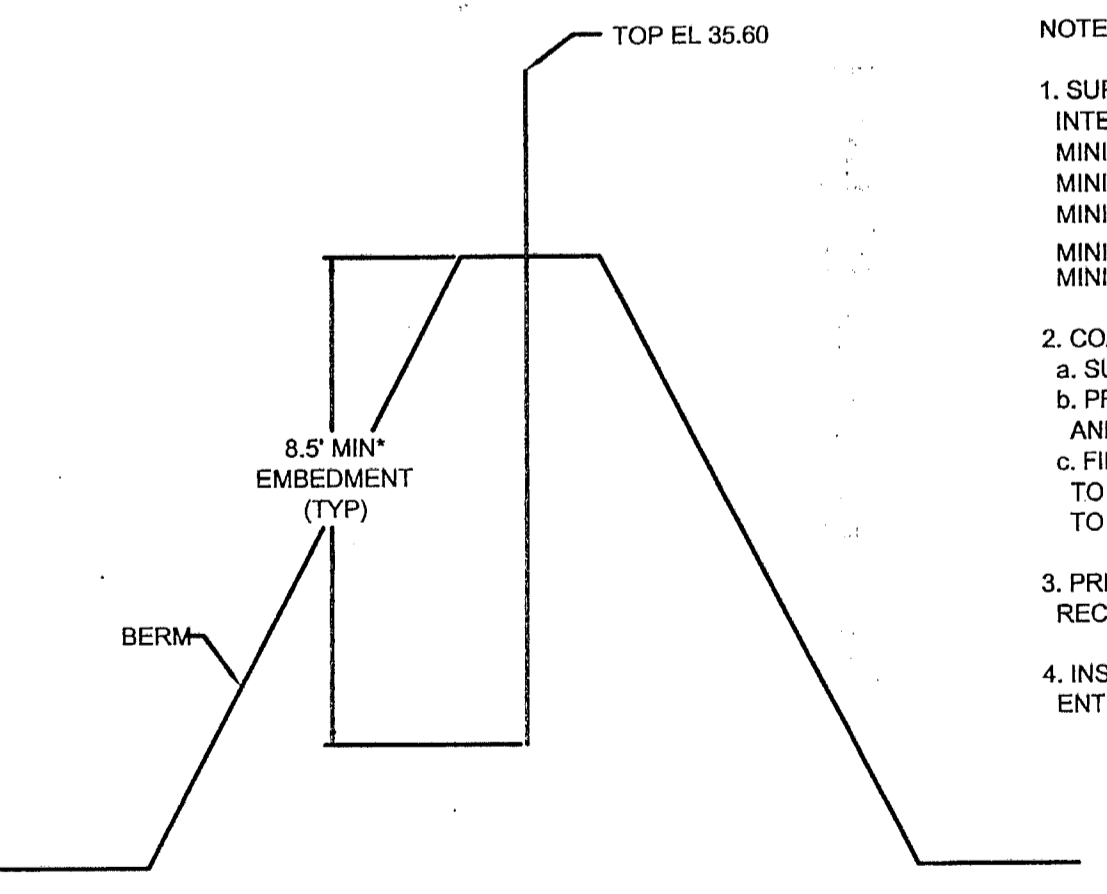


TYPICAL EXISTING SLURRY WALL DETAIL
W/ CLOSURE LINER PER RECORD DRAWINGS
NTS

- NOTES:
- 1.) USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - 2.) 10" MAX. FOR PIPE DIAMETERS LESS THAN 24"; 12" MAX. FOR PIPE DIAMETER 24" AND LESS THAN 42"; 24" MAX. FOR PIPE DIAMETER 42" AND OVER.
 - 3.) 4" MAX. FOR PIPE 16" DIAMETER & LESS; 6" MAX. FOR PIPE 18" TO 36" DIAMETER; AND 9" MAX. FOR PIPE 42" DIAMETER AND LARGER.
 - 4.) INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
 - 5.) WEARING SURFACE TO BE SAME TYPE & THICKNESS (1 1/2" MIN.) AS EXISTING PAVEMENT.
 - 6.) SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISH GRADE OR 12" BELOW SUBGRADE.
 - 7.) BASE SHALL BE 6" MINIMUM THICKNESS SAND ASPHALT OR APPROVED EQUAL.
 - 8.) BACKFILL AASHTO M-145 SHALL BE PLACED IN LAYERS NOT TO EXCEED 6 INCHES. EACH LAYER SHALL BE THOROUGHLY TAMPED AND/OR ROLLED TO 98% AASHTO T-180 DENSITY.
 - 9.) TEMPORARY PATCHES WILL BE INSTALLED TO PROVIDE A SMOOTH ALL WEATHER SURFACE AT ALL TIMES. PERMANENT REPLACEMENT TO BE MADE AS SOON AS POSSIBLE.
 - 10.) NOTES 5.) THRU 9.) ARE MINIMUM REQUIREMENTS. REFER TO MANATEE COUNTY TRANSPORTATION DEPARTMENT STANDARDS FOR ADDITIONAL REQUIREMENTS.

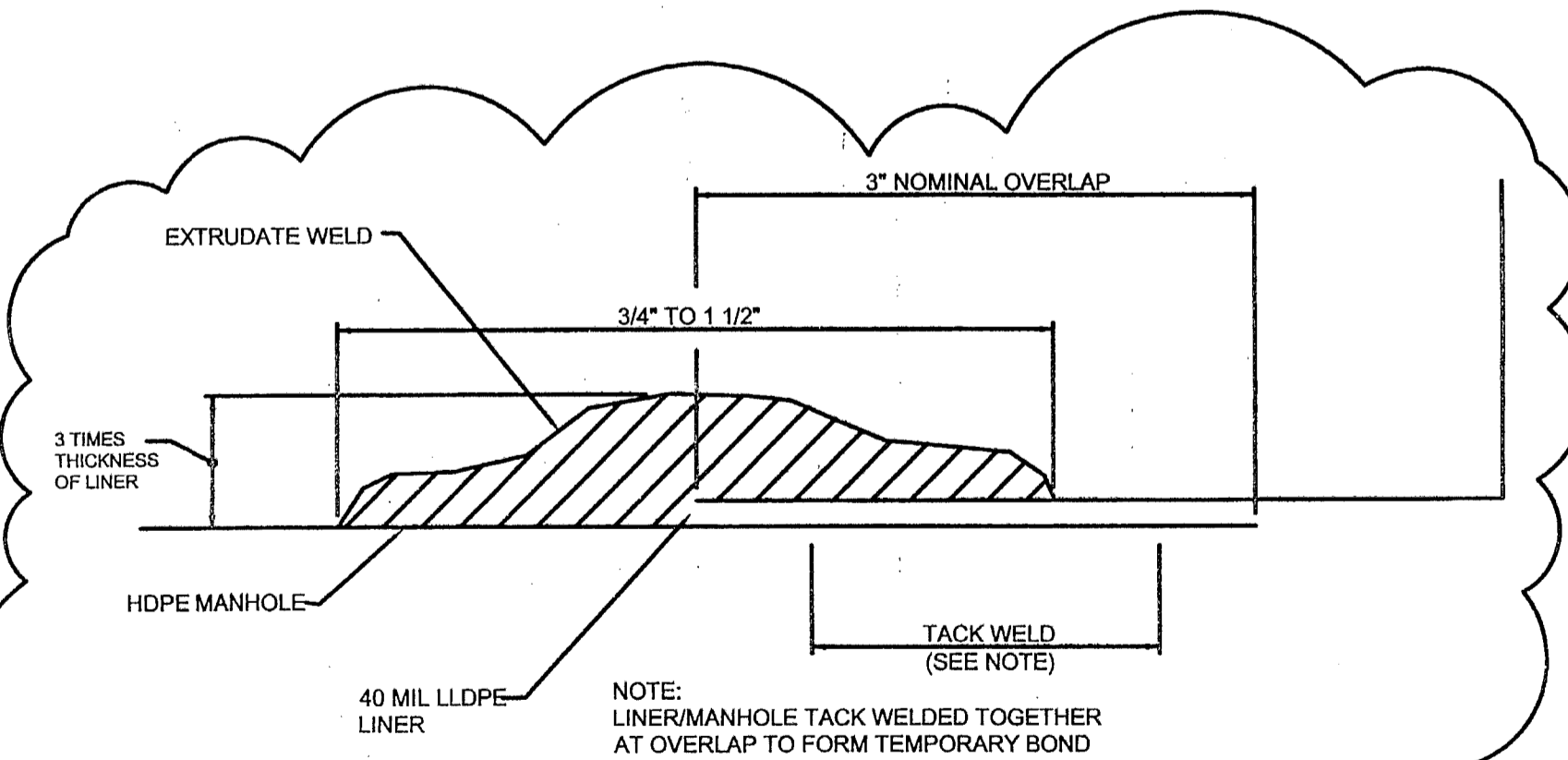


| | | | |
|---|------------------|------------------------|-------|
| MANATEE COUNTY PUBLIC WORKS DEPARTMENT | | TRENCH DETAIL | US-12 |
| REV. BY | DATE | ASPH. PAVEMENT SURFACE | |
| | MARCH 18, 1997 | TYPE A-1 PIPE BEDDING | |
| | DATE OF APPROVAL | | |

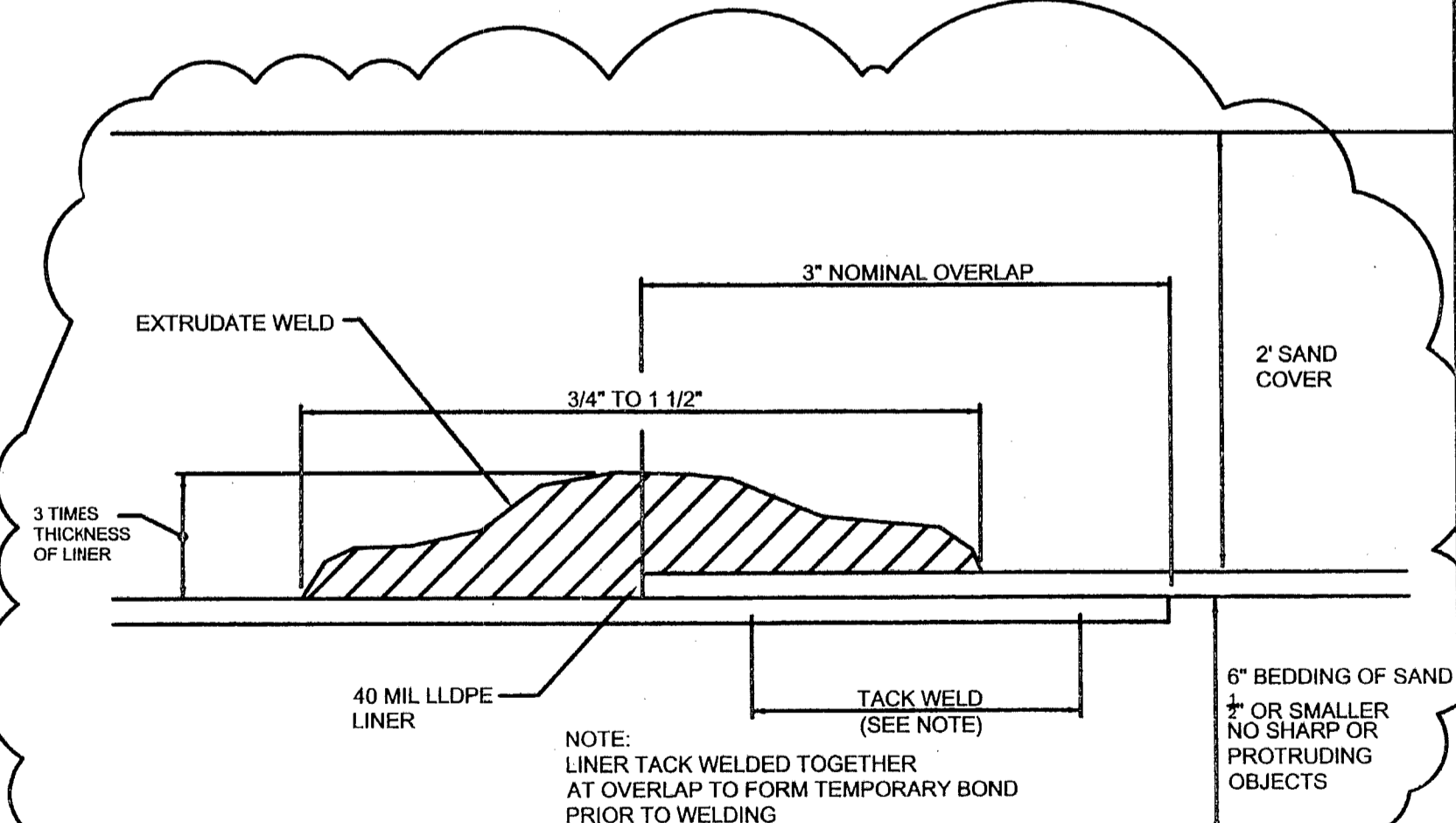


- NOTES:
1. SUPPLY AND INSTALL:
INTERLOCKING CONTINUOUS SHEET STEEL PILING
MINIMUM YIELD STRENGTH PER ASTM A328 ($f_y = 38 \text{ ksi}$)
MINIMUM MOMENT OF INERTIA = 2.80 IN⁴ PER FOOT OF SHEET
MINIMUM SECTION MODULUS = 2.4 IN³ PER PILE
MINIMUM WEB THICKNESS = 3/8"
MINIMUM WEIGHT 28.0 POUNDS PER SQUARE FOOT OF SHEET
 2. COATING: PROVIDE A COAL TAR EPOXY CORROSION RESISTANT COATING SYSTEM AS FOLLOWS:
a. SURFACE PREPARATION: SSPC-SP10, COMMERCIAL BLAST CLEANING
b. PRIME COAT: EPOXY BASED RUST INHIBITIVE PRIME COAT COMPATIBLE WITH THE FINISH COATS AND RECOMMENDED BY THE COAL TAR EPOXY COATING MANUFACTURER
c. FINISH COATS: TWO-COMPONENT COAL TAR EPOXY-POLYAMIDE BLACK COATING CONFORMING TO THE REQUIREMENTS OF THE CORPUS OF ENGINEERS SPECIFICATION C-200, APPLIED IN TWO COATS TO A MINIMUM TOTAL DRY FILM THICKNESS OF 16 MILS
 3. PREPARE THE SURFACES AND APPLY THE COATING SYSTEM IN FULL COMPLIANCE WITH THE RECOMMENDATIONS AND WRITTEN INSTRUCTIONS OF THE COATING MANUFACTURER
 4. INSTALL PILES IN A PLUMB POSITION WITH EACH PILE INTERLOCKED WITH ADJOINING PILES FOR ITS ENTIRE LENGTH TO FORM A CONTINUOUS DIAPHRAGM THROUGHOUT THE LENGTH OF EACH RUN OF WALL

SHEET PILE DETAIL
NTS



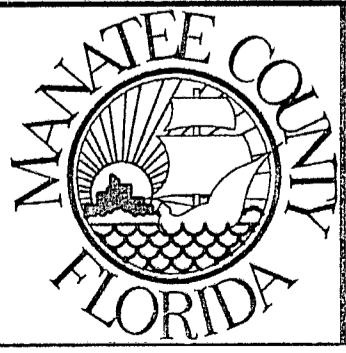
LINER CONNECTION TO MANHOLE
NTS



LINER REPAIR DETAIL
NTS

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Ph. (941) 954-4036

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PROJECT MANAGEMENT
DEPARTMENT**
1026 26th AVENUE EAST
BRADENTON, FLORIDA 34208

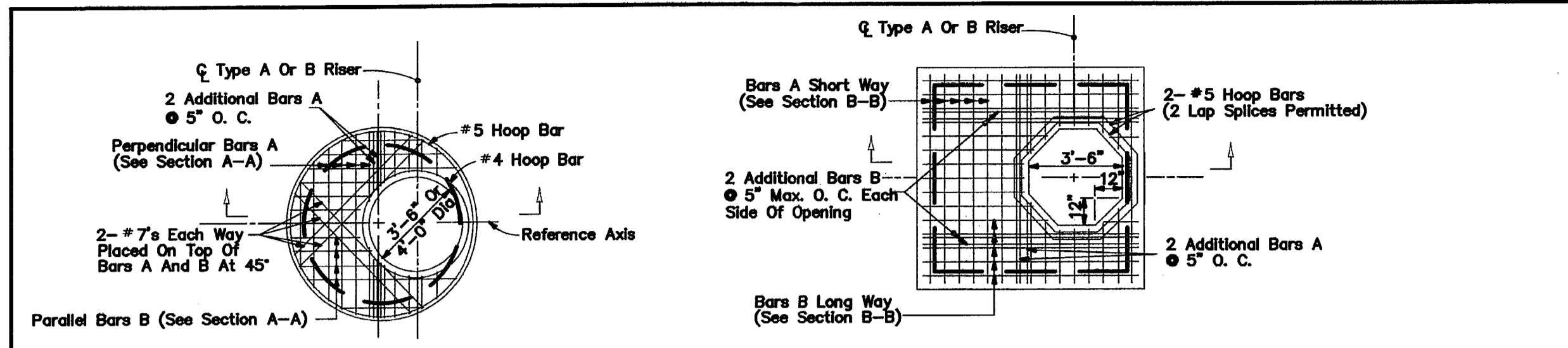


PROJECT
LENA ROAD LANDFILL
STORMWATER SYSTEM IMPROVEMENTS

TASK
DETAILS

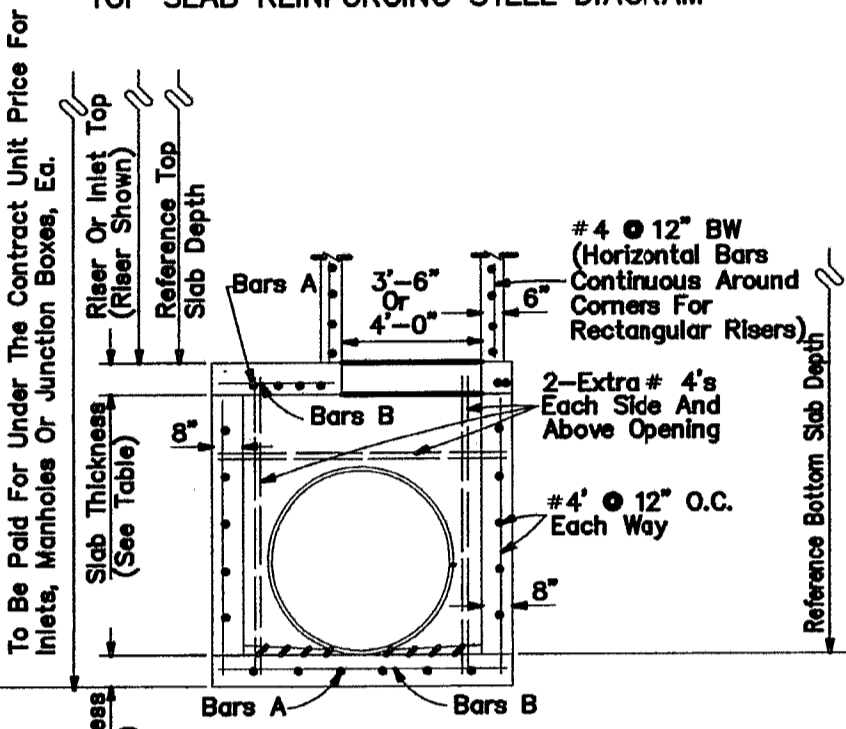
ORIGINAL: JUNE, 03
REVISIONS:
1. SEPTEMBER, 04-SWFWM COMMENTS
2. SEPTEMBER, 05-FDEP COMMENTS
3.
4.
5.

ENGINEER: JAS
DRAWN: JAS
DESIGNED: JME
CHECKED: JME
QC: DAW
JOB NO. 120507.10
SHEET 13



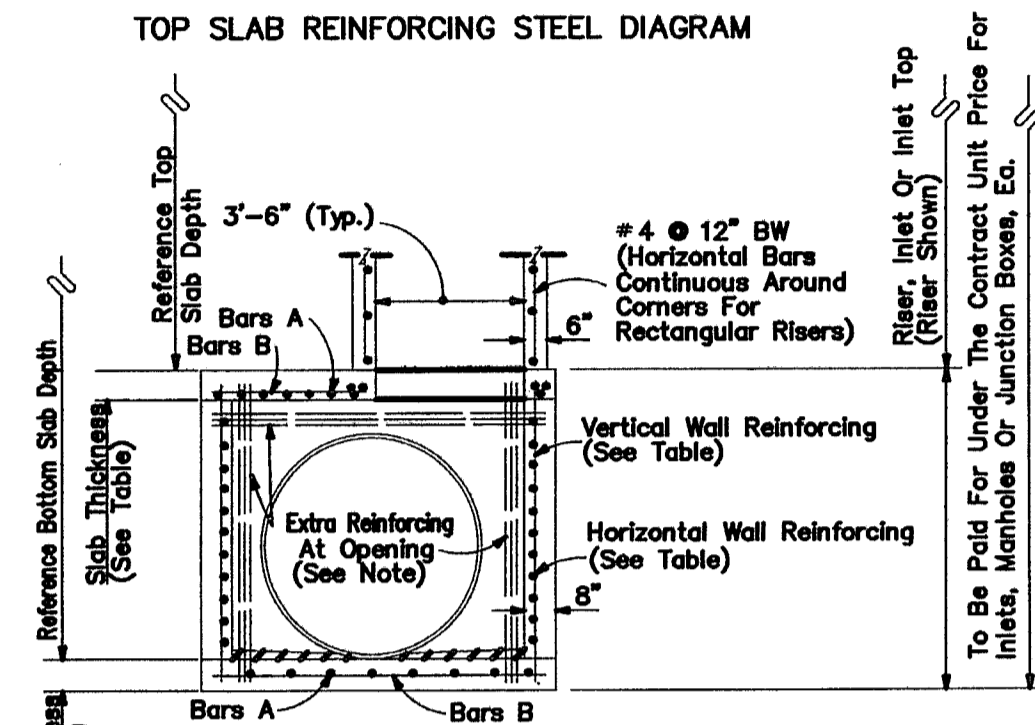
NOTE: Not Applicable For Type C, D & E Ditch Bottom Inlets. See Index No. 232.

TOP SLAB REINFORCING STEEL DIAGRAM

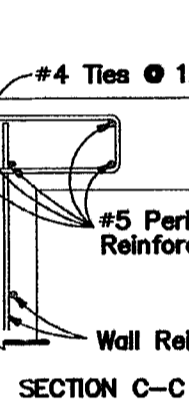


* NOTE: When the inside diameter of a round structure is not more than 1'-5" larger than the opening in the riser or top slab, the top of the structure or riser shall be constructed according to the "Special Top Slab" details on this sheet.

TOP SLAB REINFORCING STEEL DIAGRAM



* NOTE: Provide extra reinforcing each side of each opening at 3" maximum spacing equal to half the area of vertical reinforcement removed by the opening and provide the same area of reinforcement above each opening at 3" maximum spacing as removed by the opening.



SPECIAL TOP SLAB*

GENERAL NOTES

- 1. Standard structure bottoms 4'-0" diameter and smaller (Alt. A) and 3'-6" square (Alt. B) are designated Type P. Larger standard structure bottoms are designated Type J. Risers are permitted for all structures.
2. Walls of circular structures (Alternate A) constructed in place may be of non-reinforced concrete or brick or reinforced concrete. Precast and rectangular structures (Alternate B) shall be constructed of reinforced concrete only.
3. Wall thickness and reinforcement are for other reinforced cast-in-place or precast concrete units except that precast circular units may be furnished with walls in accordance with either A.S.T.M. C-478 (up to 96" diameter) or A.S.T.M. C-76, Class B, B Mod., modified where the elliptical steel cage area is placed in the center one-third of the wall.

Rotate #4 Bars As Required To Maintain Cover

- 4. Top and floor slab thickness and reinforcement are for precast and cast in place construction. Top and floor slabs shall be of Class II concrete. Concrete as specified in A.S.T.M. C-478 (4000 psi) may be used in lieu of Class I and Class II concrete in precast forms manufactured in plants which are under the "Standard Operating Procedures" for the inspection of precast drainage products.
5. All reinforcement shown is A.S.T.M. A615/A615m Grade 60 steel, either smooth or deformed. Equivalent area Grade 40 steel or Grade 60S35 welded wire fabric may be substituted according to Index No. 201.
6. Structure bottoms may be used in conjunction with cast inlet top Types 1, 2, 3, 4, 5, 6, 9, and 10, and any manhole or junction box unless otherwise shown in the plans or other standard drawings. Alt. B structure bottoms may be used in conjunction with cast inlet Types 7 & 8, or any ditch bottom inlet unless otherwise shown in the plans or other standard drawings.
7. Rectangular structures may be rotated as directed by the Engineer in order to facilitate connections between the structure walls and storm sewer pipes.
8. Except when AGI hooks are specifically required, reinforcement top and bottom slabs shall be straight embedment.
9. All steel bars shall have 1 1/2" minimum cover unless otherwise shown except for precast circular units manufactured under ASTM C76 OR ASTM C478. Horizontal steel in rectangular structures shall be lapped a minimum of 24 diameters at corners.

SLAB DESIGNS - SQUARE AND RECTANGULAR STRUCTURES (ALL SLABS 8" THICK - REINFORCING PARALLEL TO SHORT WAY AND LONG WAY)

Table of slab designs for square and rectangular structures. Columns include Slab Depth, Schedule, Slab Depth, and Schedule for Short-Way and Long-Way. Rows cover sizes from 3'-0" to 10'-0" with various reinforcement schedules (A-F).

Table of slab designs for square and rectangular structures. Columns include Slab Depth, Schedule, Slab Depth, and Schedule for Short-Way and Long-Way. Rows cover sizes from 8'-0" to 12'-0" with various reinforcement schedules (A-F).

SLAB DESIGNS - ROUND STRUCTURES

Table of slab designs for round structures. Columns include Slab Depth, Slab Thickness, and Reinforcing Schedule. Rows cover sizes from 3'-0" to 12'-0" with various reinforcement schedules (A-F).

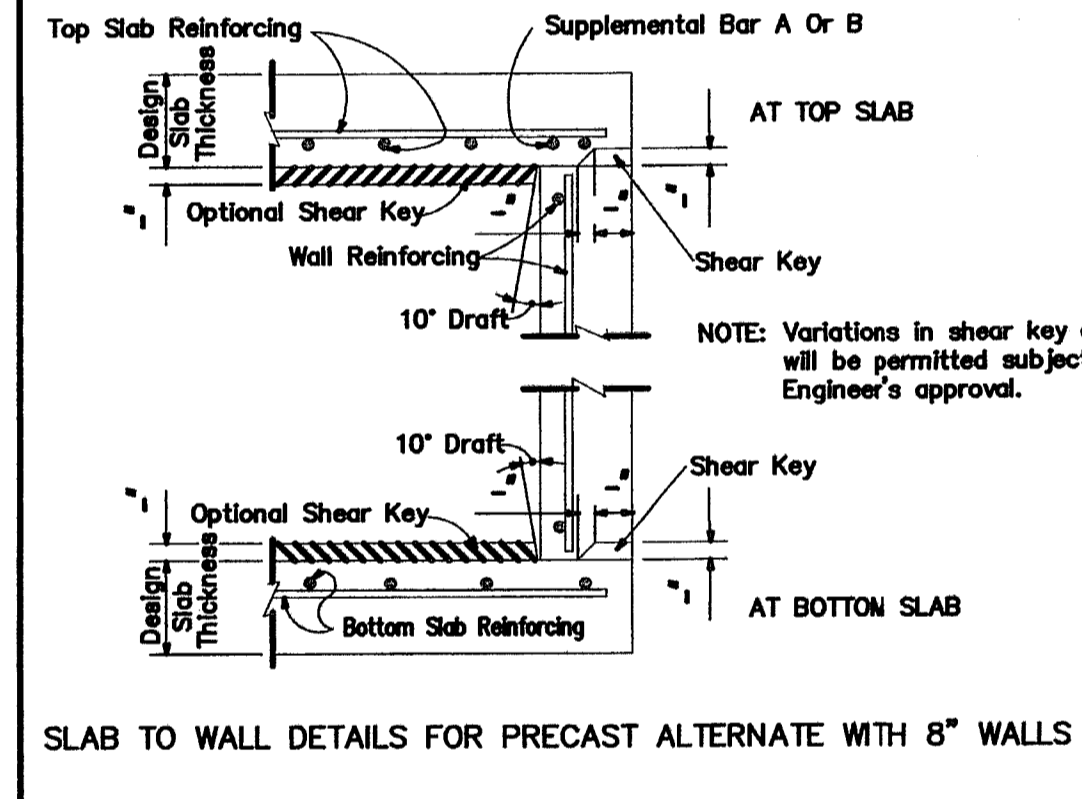
WALL DESIGNS - RECTANGULAR STRUCTURES

Table of wall designs for rectangular structures. Columns include Wall Depth, Schedule, Wall Depth, and Schedule for Vertical and Horizontal Reinforcing. Rows cover sizes from 3'-0" to 10'-0" with various reinforcement schedules (A-F).

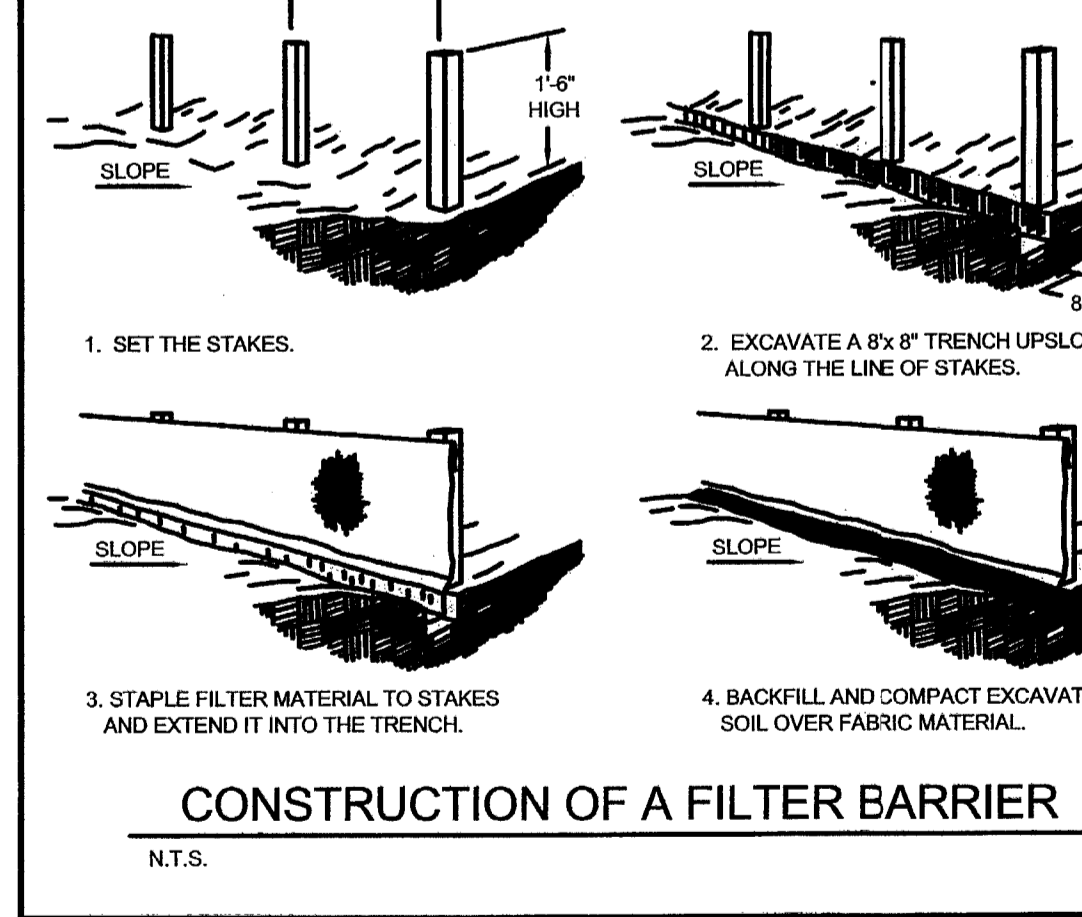
Table of reinforcing schedule for Grade 60 Steel. Columns include Schedule and Grade 60 Steel (W.R. Fabric) in ft/ft. Rows cover sizes from 3'-0" to 12'-0" with various reinforcement schedules (A-F).

SIZE is inside length of a structure wall. Precast structures 3'-6" x 3'-6" may be cast with 6" walls to depths of 15". See Index 201.

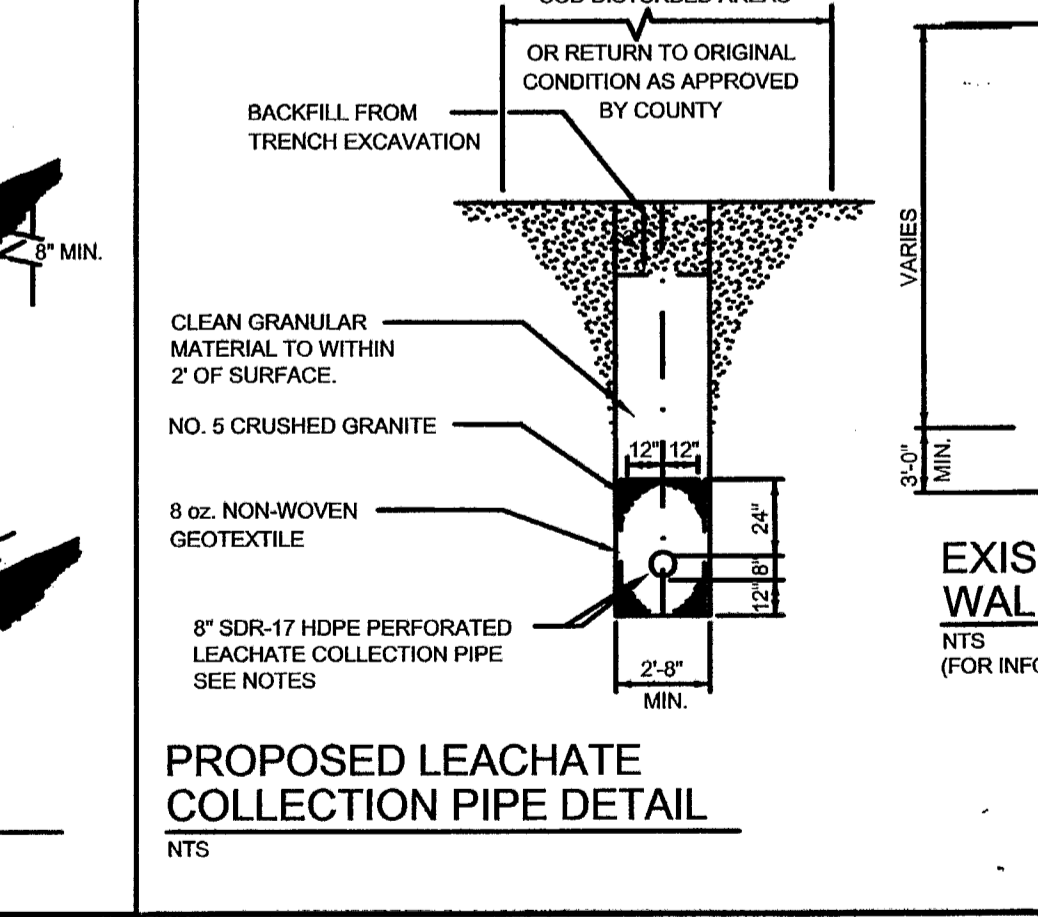
- GENERAL NOTES
1. Slab reinforcement is appropriate for top, intermediate, and bottom slabs.
2. Slab depth is measured from finished grade to top of slab.
3. Wall design depth is measured to the top of the bottom slab for boxes and to the top of the intermediate slab for risers.
4. Wall height is the distance between top of lower slab to bottom of upper slab.
5. Wall sizes exceeding 9'-0" require special design.



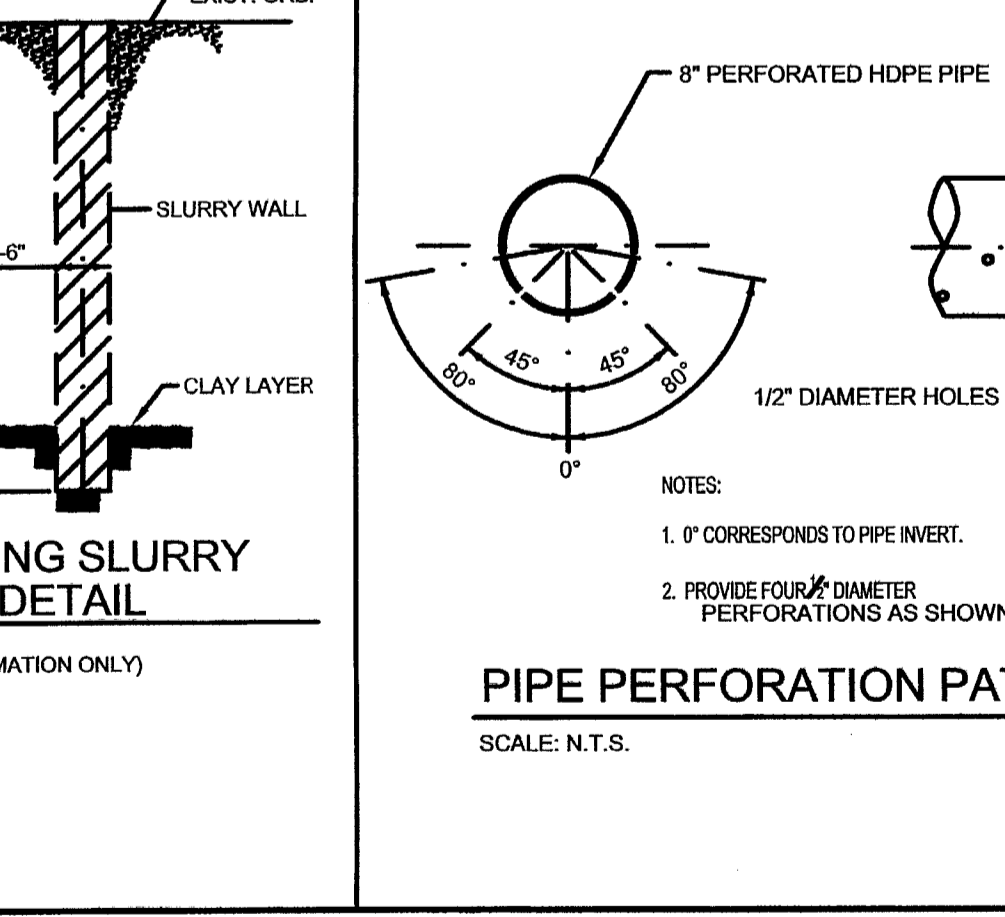
SLAB TO WALL DETAILS FOR PRECAST ALTERNATE WITH 8" WALLS



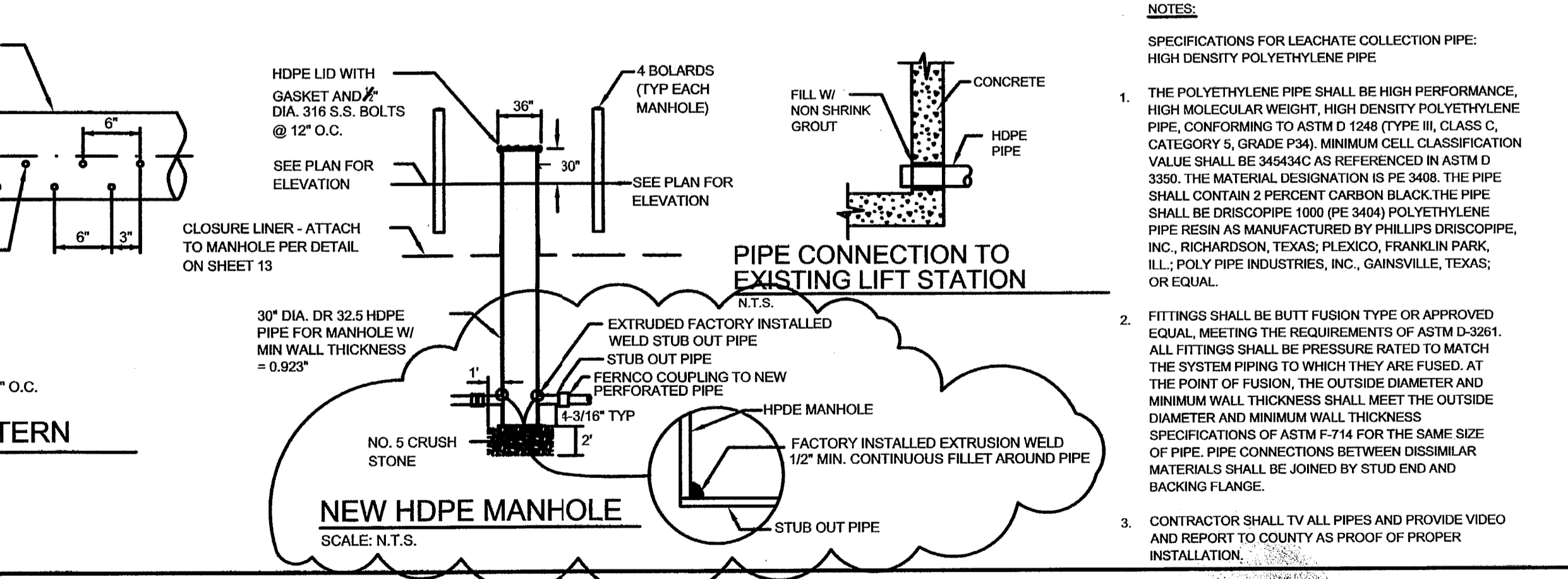
CONSTRUCTION OF A FILTER BARRIER



PROPOSED LEACHATE COLLECTION PIPE DETAIL



PIPE PERFORATION PATTERN



PIPE CONNECTION TO EXISTING LIFT STATION

PBS&J logo and contact information for Principal and Production addresses in Miami and Sarasota, Florida.

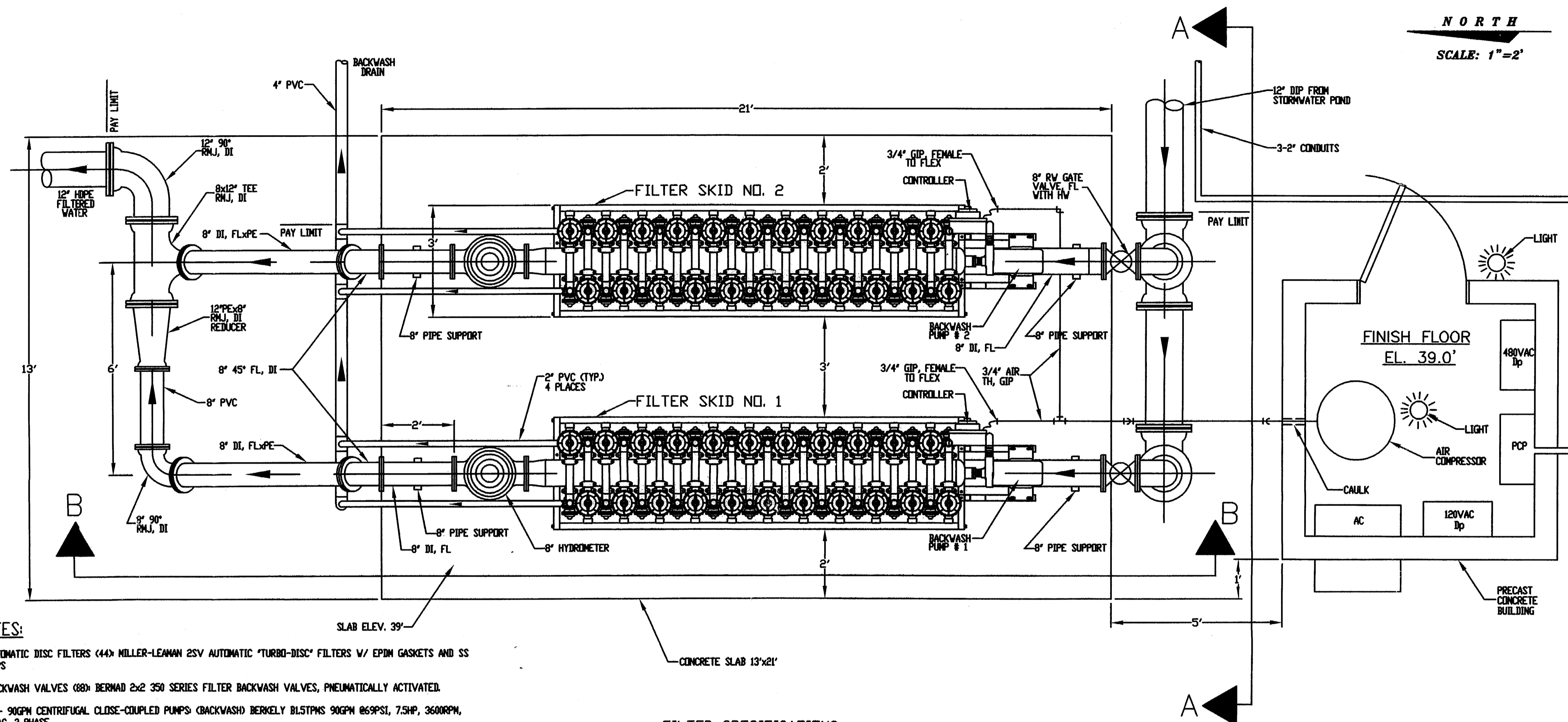
Client information for Manatee County Project Management Department, 1026 26th Avenue East, Bradenton, Florida 34208.

Project information for Lena Road Landfill Stormwater System Improvements.

Task information for Details and original date of June 03.

Revisions list: 1. SEPTEMBER 04-SWFWM COMMENTS, 2. SEPTEMBER 05-FDEP COMMENTS.

Professional Engineer information for John M. Eash, License No. 120507.10, and sheet number 14.



NOTES:

1. AUTOMATIC DISC FILTERS (44) MILLER-LEAMAN 2SV AUTOMATIC "TURBO-DISC" FILTERS W/ EPDM GASKETS AND SS CLAMPS
2. BACKWASH VALVES (88) BERNAD 2x2 350 SERIES FILTER BACKWASH VALVES, PNEUMATICALLY ACTIVATED.
3. 2 - 90GPM CENTRIFUGAL CLOSE-COUPLED PUMPS (BACKWASH) BERKELY D15TPMS 90GPM @69PSI, 7.5HP, 3600RPM, 480VAC, 3 PHASE
4. MAGNETIC DRIVE HYDROMETER(2) BERNAD MODEL 910
5. BACKWASH CONTROLLER (2) MILLER-LEAMAN MILLENNIUM 12/8 VERSION CONTROLLER, 115VAC INPUT, 24VDC OUTPUT
6. SOLENOIDS: BURKERT TYPE 5470 PNEUMATIC SOLENOIDS,
7. SYSTEM MAINLINE MANIFOLDS: 8" DIAMETER, SCHEDULE 10, T304 STAINLESS STEEL PIPE & FITTINGS. 8. SKID FRAME: 2" SQUARE, SCHEDULE 10, T304 STAINLESS STEEL.
9. AIR COMPRESSOR: 3HP, SAYLOR BEALL MODEL 730-60 VERTICAL COMPRESSOR, 480VAC, 60Hz, 3-PHASE
10. FLANGE ADAPTER: EBAA MEGAFLANGE, SERIES 2100, DI
11. PVC BELL RESTRAINT: EBAA SPLIT SERRATED RESTRAINT, SERIES 1600, DI
12. PVC RNJ RESTRAINT: EBAA SPLIT RESTRAINT SERIES 2000SV, DI
13. PIPE SUPPORTS: STANDEX MODEL S92 SADDLE SUPPORT
14. PVC < 3" = SCHEDULE 80
15. PVC >= 3" = C900 DR25

FILTER SPECIFICATIONS:

1. FILTER REQUIRED: 2 SKIDS (22 FILTER PODS EACH)
2. MFR & MODEL NO: MILLER LEAMAN 2 SV
3. FILTER CAPACITY: 700 GPM EACH (1400 GPM TWD)

POST, BUCKLEY, SCHUH & JERNIGAN, INC., D/B/A



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2001 MW 107th AVENUE
MIAMI, FL 33172-2507
FBRP CERT. OF AUTH. No. 24

PRODUCTION ADDRESS:
2803 FRUITVILLE ROAD, SUITE 130
SARASOTA, FLORIDA 34237
Ph. (941) 954-4036

CLIENT

**MANATEE COUNTY
PROJECT MANAGEMENT
DEPARTMENT**



4410 66TH STREET WEST
BRADENTON, FLORIDA 34210

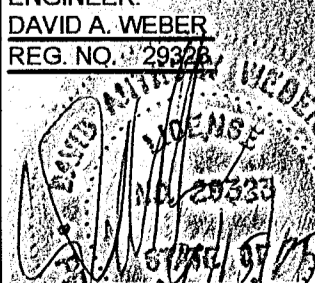
| | |
|----------------|--------------------------------|
| PROJECT | LENA ROAD LANDFILL |
| TASK | STORMWATER SYSTEM IMPROVEMENTS |

| | |
|-------------|--|
| TASK | STORMWATER AUTOMATIC DISC FILTER SYSTEM PLAN |
|-------------|--|

| | |
|-------------------|-----------|
| ORIGINAL: | APR. 2003 |
| REVISIONS: | |
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |

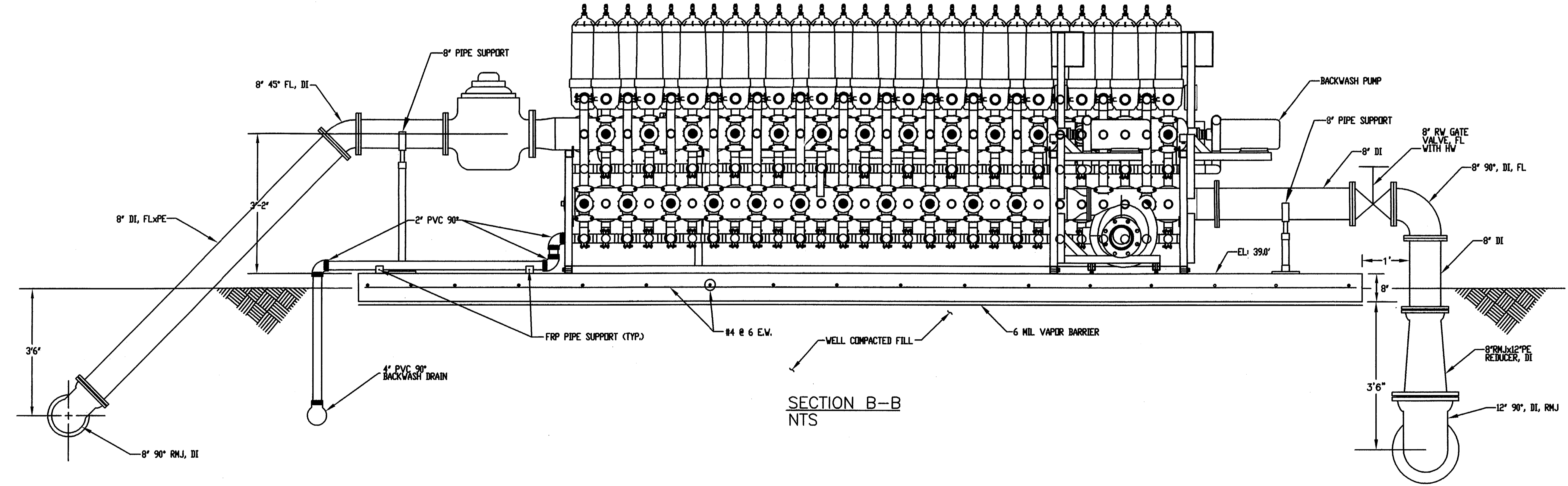
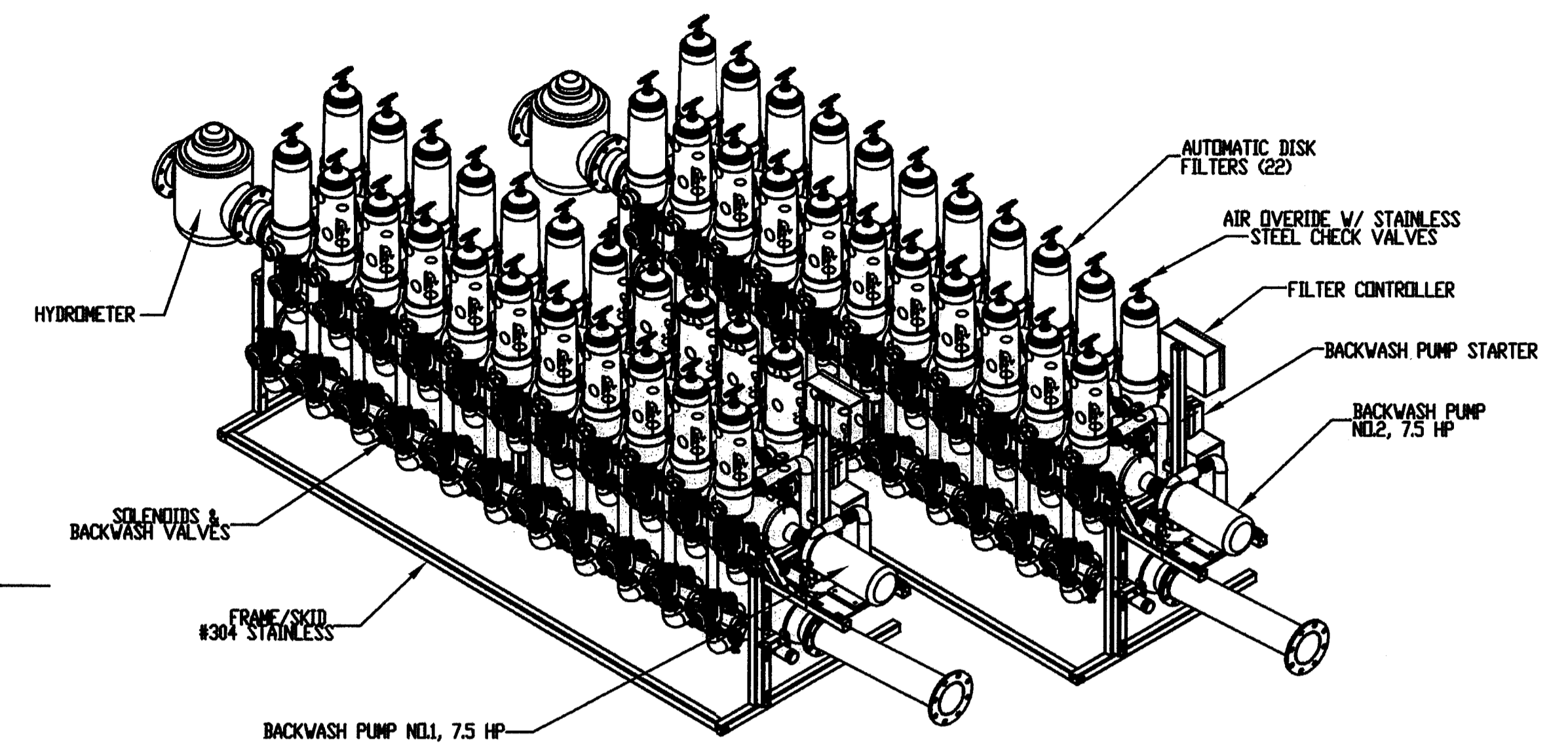
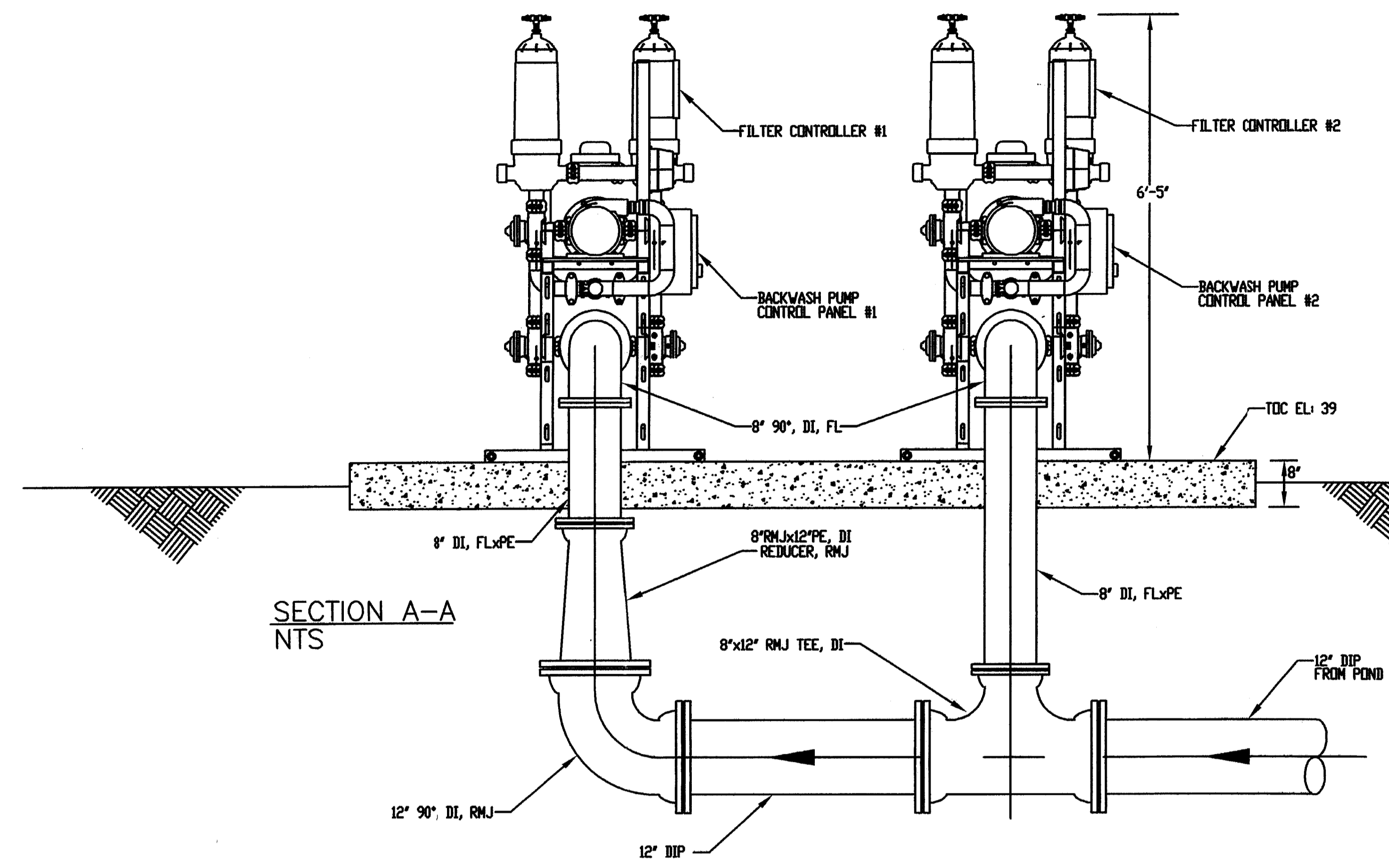
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| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |
| 11 | |
| 12 | |

ENGINEER:
DAVID A. WEBER
REG. NO. 28326



| | |
|-----------------|-----------|
| JOB NO. | 100197.12 |
| DRAWN | BZ |
| DESIGNED | BZ |
| CHECKED | BZ |
| QC | DW |
| SHEET | 15 |

DEP
SEP 20 2005
Southwest District Tampa



POST, BUCKLEY, SCHUH & JERNIGAN, INC., D/B/W
PBS&J
 PRINCIPAL ADDRESS:
 2001 NW 107th AVENUE
 MIAMI, FL 33172-2507
 FBRP CERT. OF AUTH. No. 24
 PRODUCTION ADDRESS:
 2803 FRUITVILLE ROAD, SUITE 130
 SARASOTA, FLORIDA 34237
 Ph. (941) 954-4036

CLIENT
**MANATEE COUNTY
 PROJECT MANAGEMENT
 DEPARTMENT**
 4410 66TH STREET WEST
 BRADENTON, FLORIDA 34210

PROJECT
 LENA ROAD LANDFILL
 STORMWATER SYSTEM IMPROVEMENTS

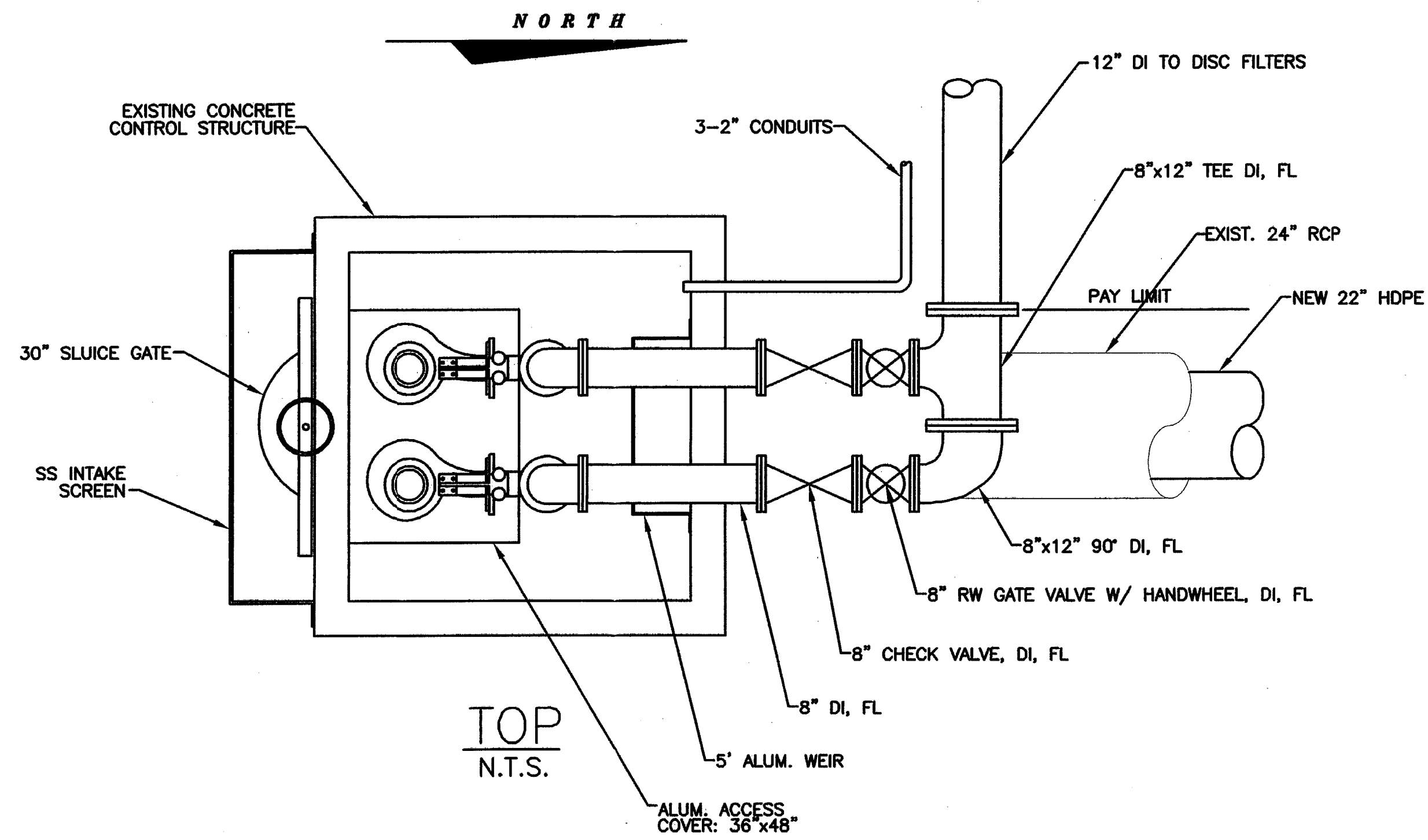
TASK
 STORMWATER
 AUTOMATIC DISK FILTER SYSTEM
 SECTIONS

ORIGINAL: APR. 2003
 REVISIONS:
 1
 2
 3
 4
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6
 7
 8
 9
 10
 11
 12

ENGINEER:
 DAVID A. WEBER
 REG. NO. 29323
 DESIGNER:
 BZ
 CHECKED:
 BZ
 QC:
 DW
 SHEET 16

D.E.P.
 SEP 20 2005
 Southwest District Tampa



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 |

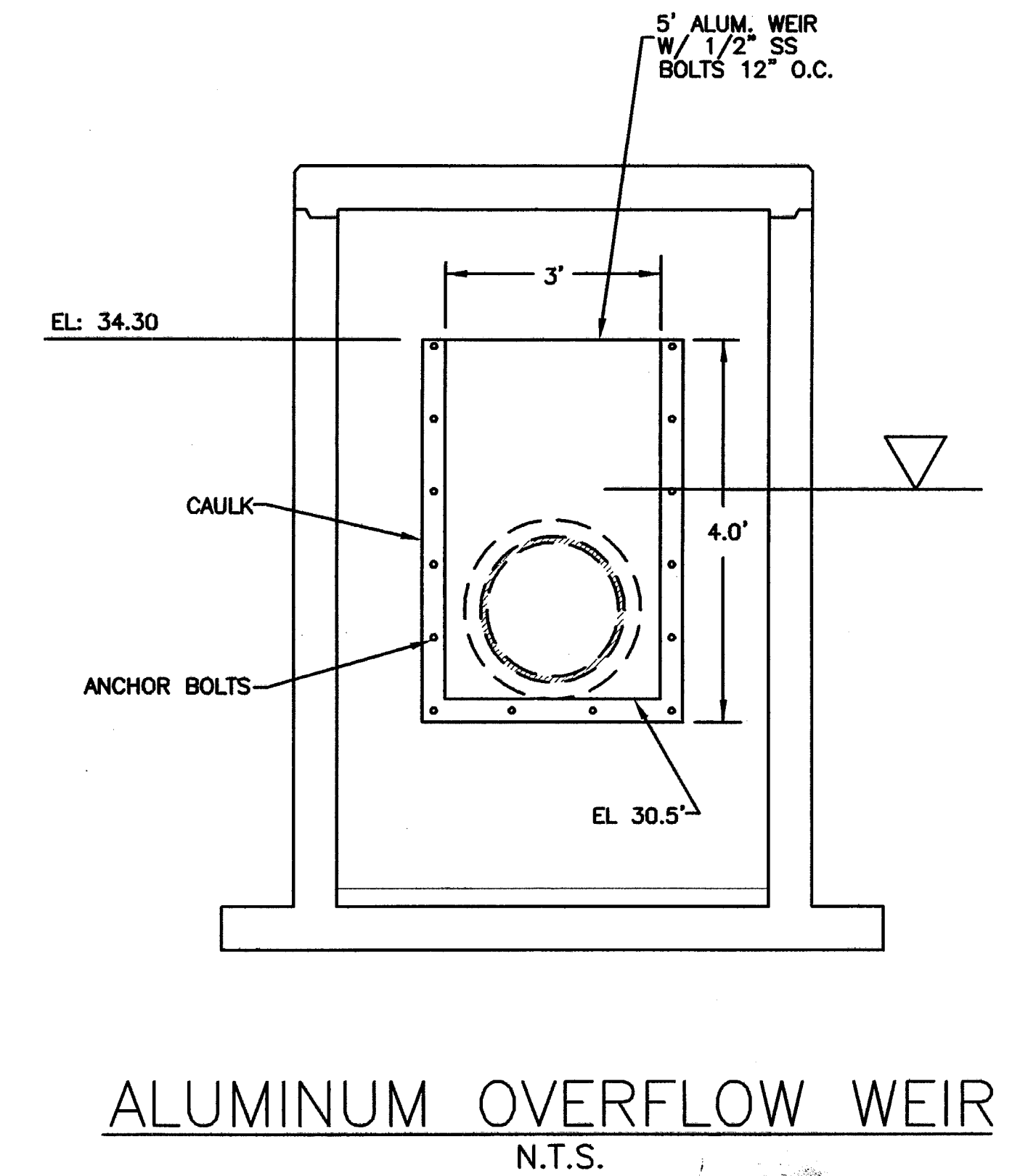
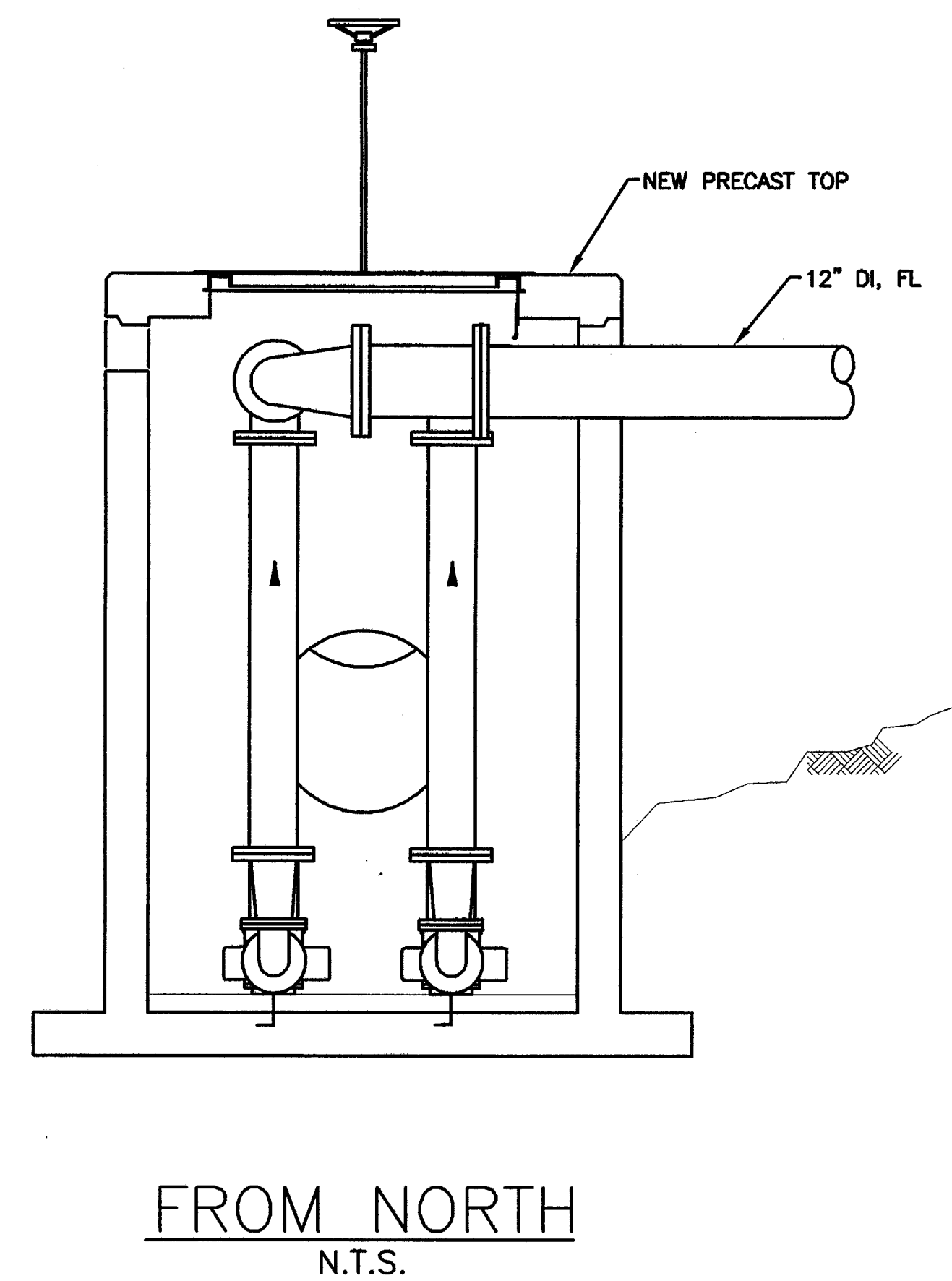
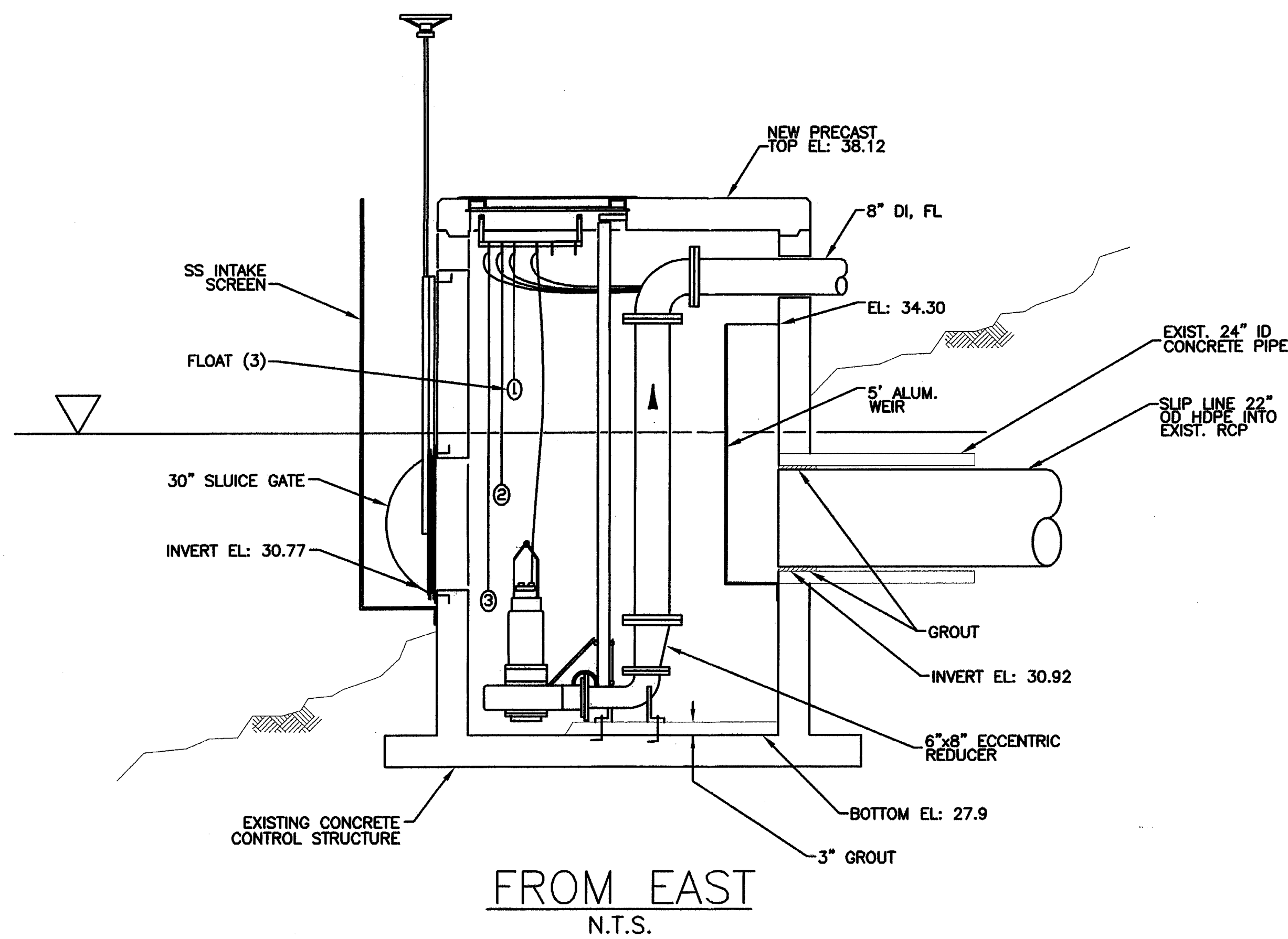
* HP SHALL BE ADEQUATE THRU ALL POINTS ON THE PUMP CURVE

PUMP CONTROL LEVELS

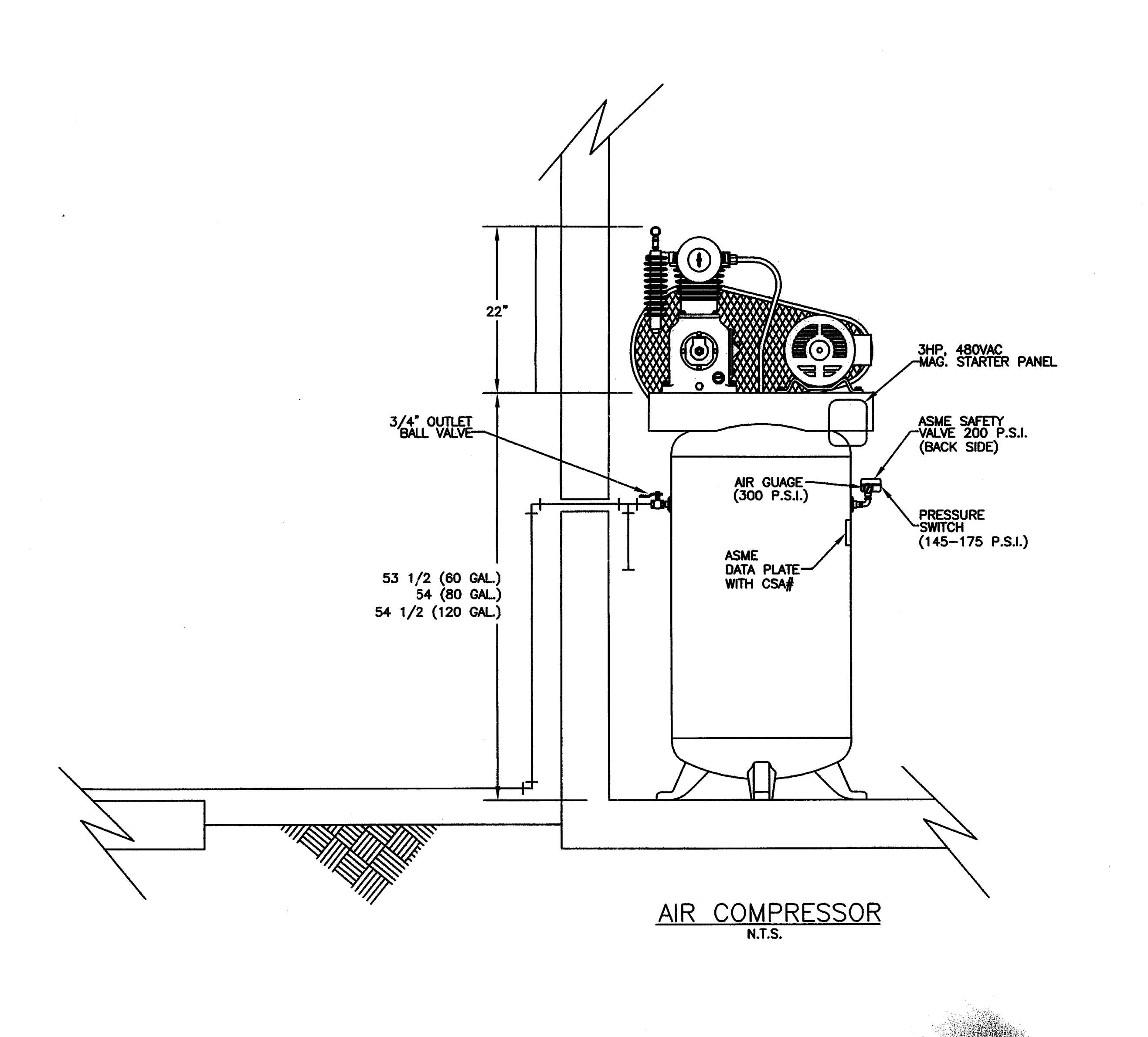
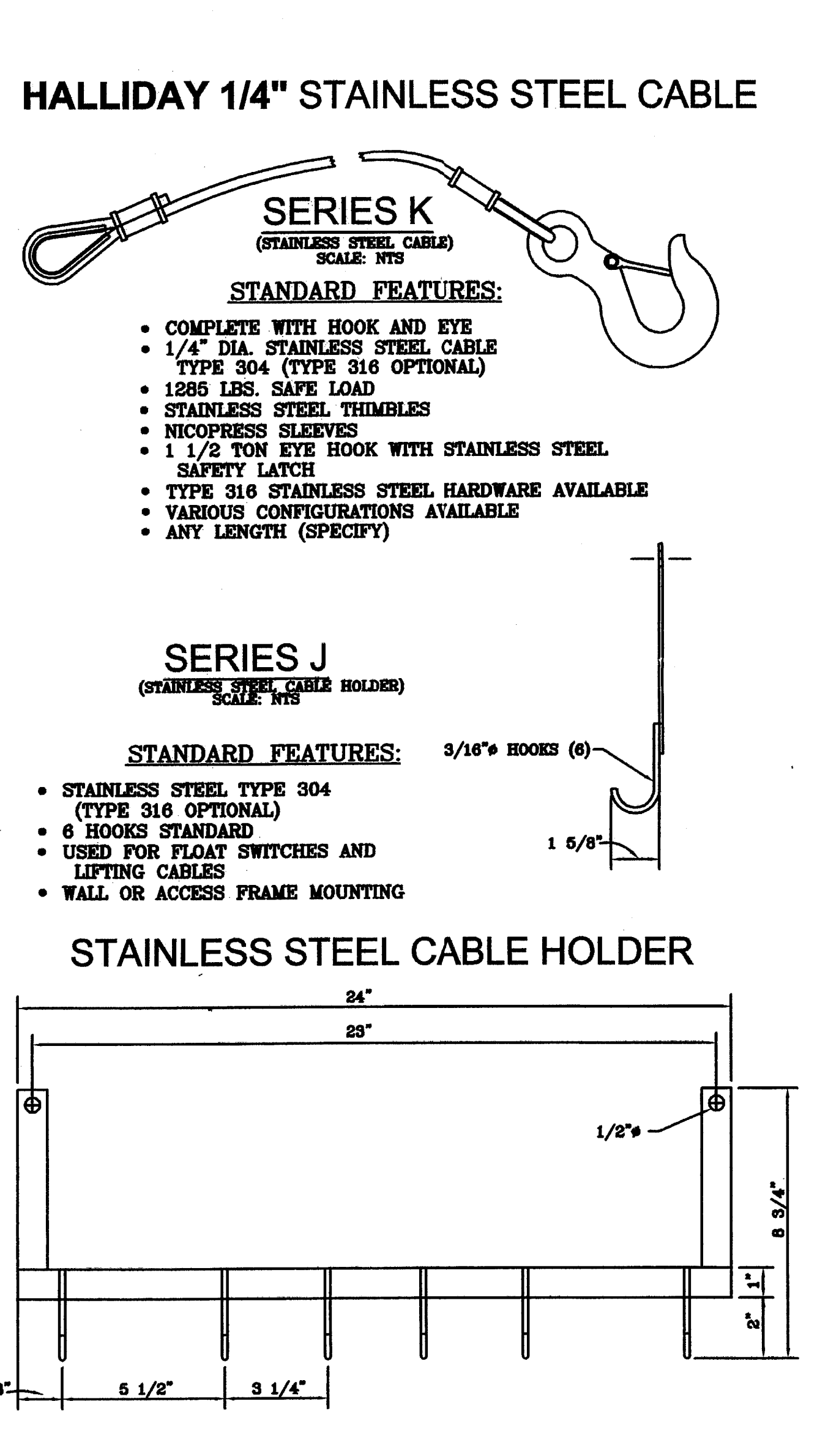
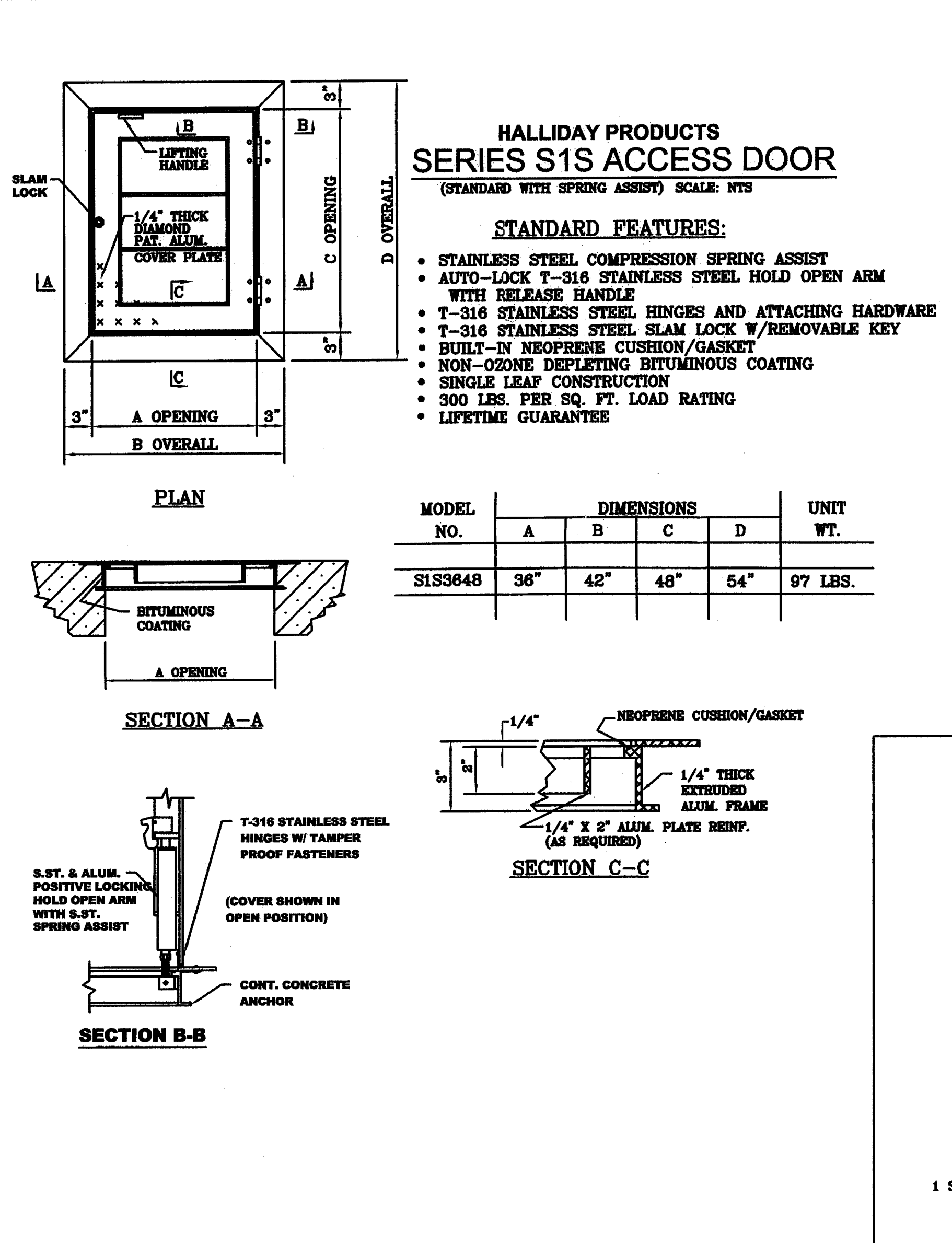
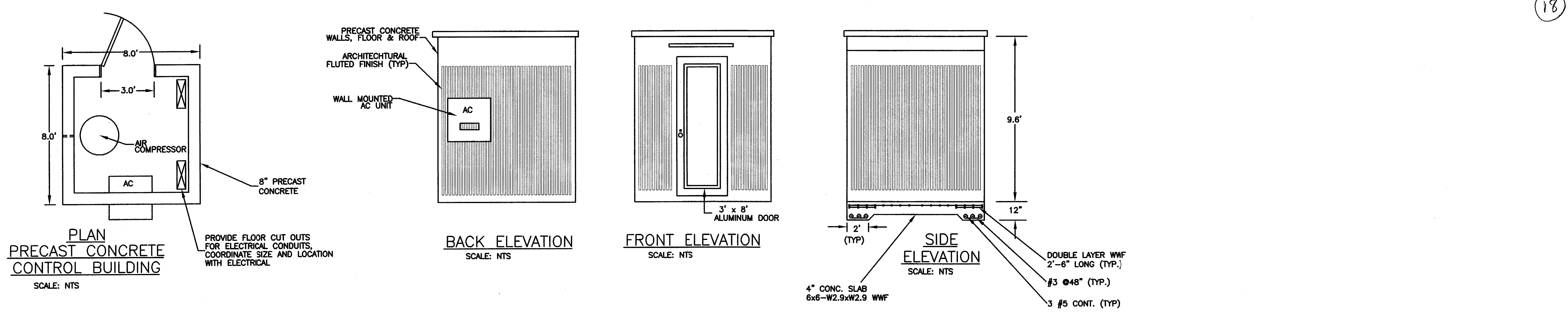
| | |
|---------------------|-------------|
| ▽ HIGH WATER ALARM | ELEV. 34.00 |
| ▽ LEAD PUMP No.1 ON | ELEV. 32.77 |
| ▽ ALL PUMPS OFF | ELEV. 30.77 |

STATION DESIGN

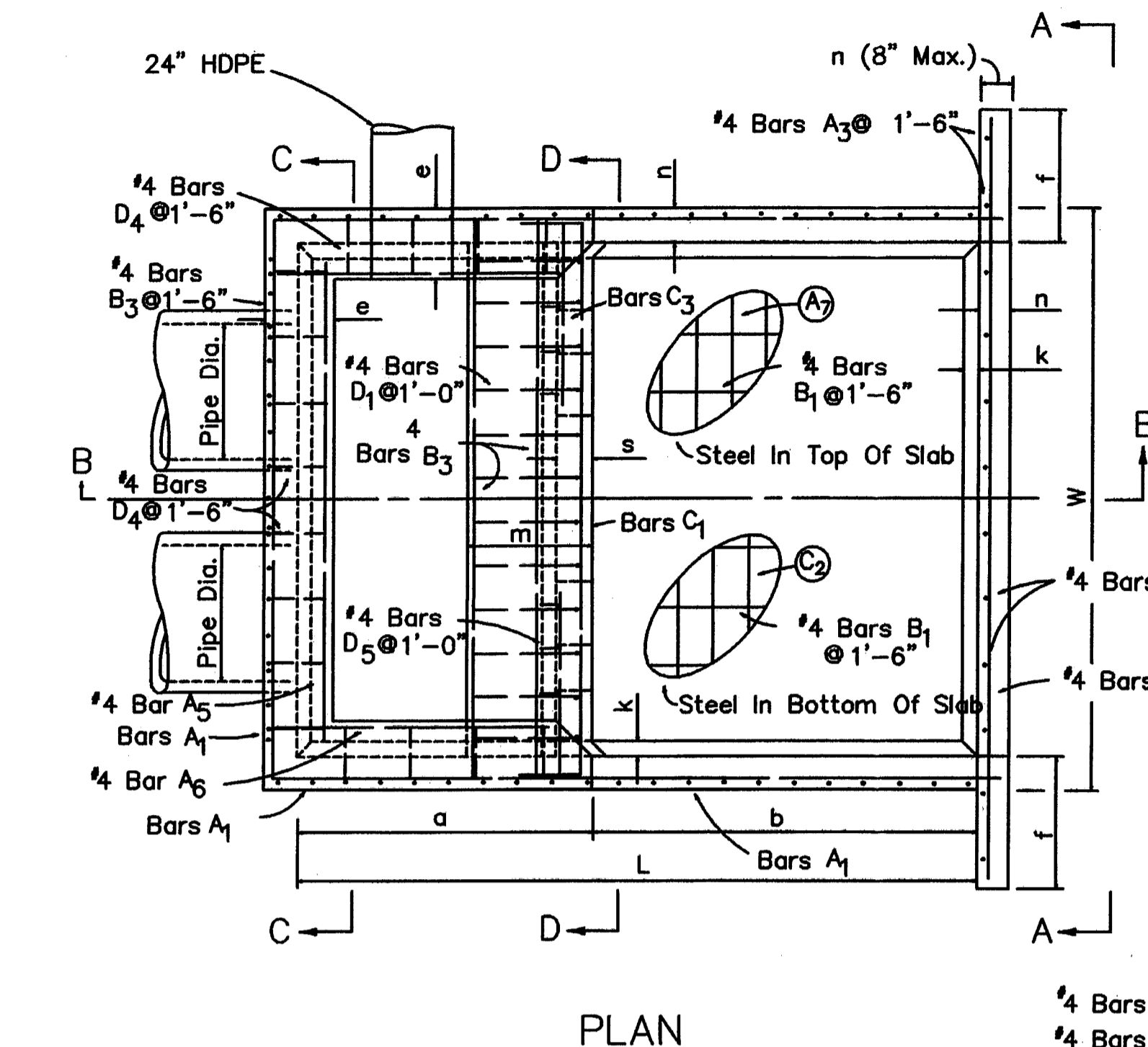
800 GPM (ONE PUMP)
1600 GPM (TWO PUMPS)



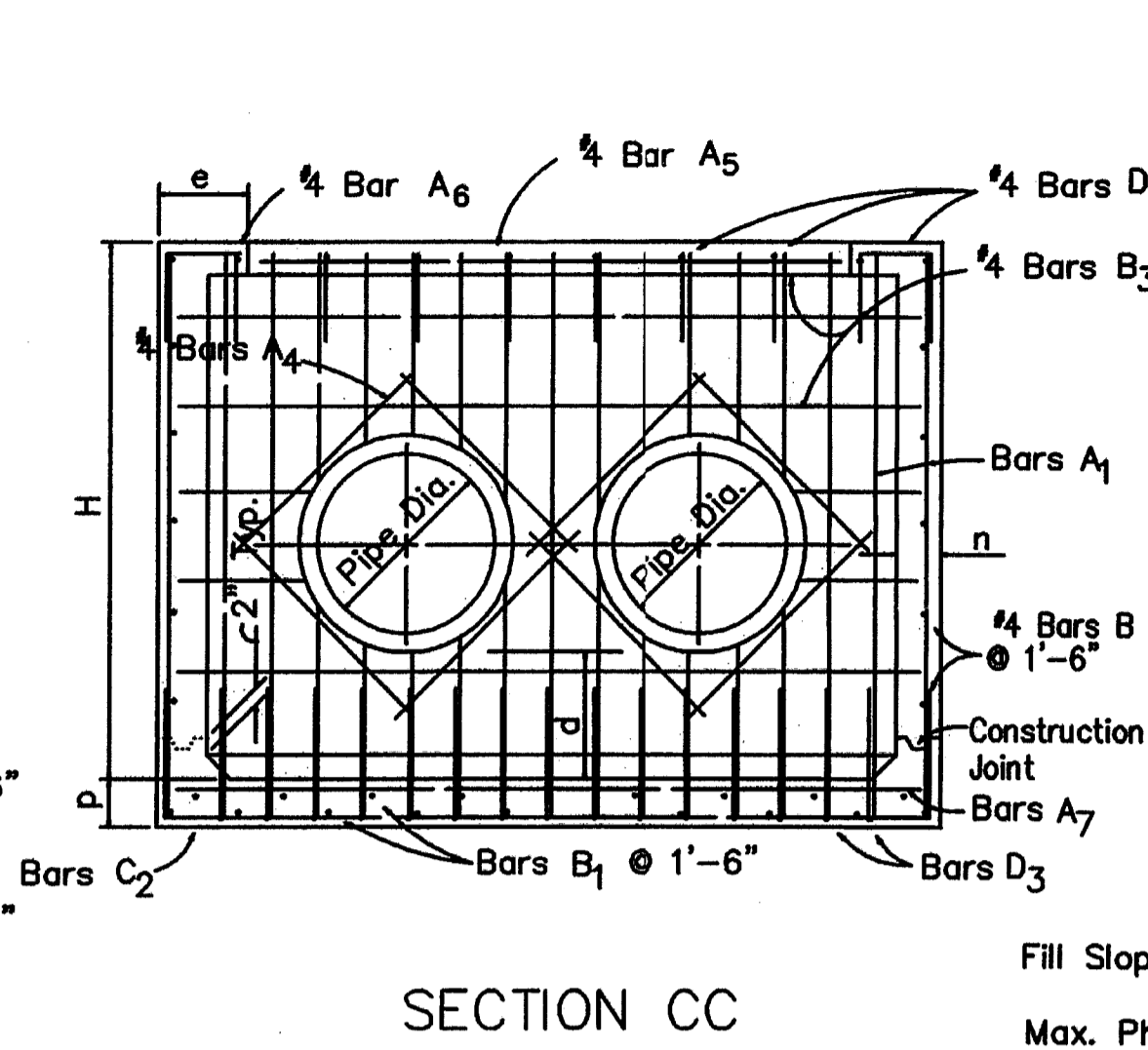
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|--|---|---|--|--|--|--|--|---|--|
| | POST, BUCKLEY, SCHUH & JERNIGAN, INC., DB/IA PRINCIPAL ADDRESS: 2001 NW 107th AVENUE MIAMI, FL 33172-2507 FBRP CERT. OF AUTH. No. 24 PRODUCTION ADDRESS: 2803 FRUITVILLE ROAD, SUITE 130 SARASOTA, FLORIDA 34237 Ph. (941) 954-4036 | CLIENT MANATEE COUNTY PROJECT MANAGEMENT DEPARTMENT 4410 66TH STREET WEST BRADENTON, FLORIDA 34210 | | PROJECT LENA ROAD LANDFILL STORMWATER SYSTEM IMPROVEMENTS | TASK STORMWATER AUTOMATIC DISC FILTER SYSTEM FILTER FEED PUMPS | ORIGINAL: APR. 2003 REVISIONS: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ | 6 _____ 7 _____ 8 _____ 9 _____ 10 _____ 11 _____ 12 _____ | ENGINEER: DAVID A. WEBER REG. NO. 23028 | JOB NO. 300197.12 DRAWN BY BZ DESIGNED BY BZ CHECKED BY BZ GC BY DW SHEET 17 |
| | SEP 20 2005 Southwest District Tampa | | | | | | | | |



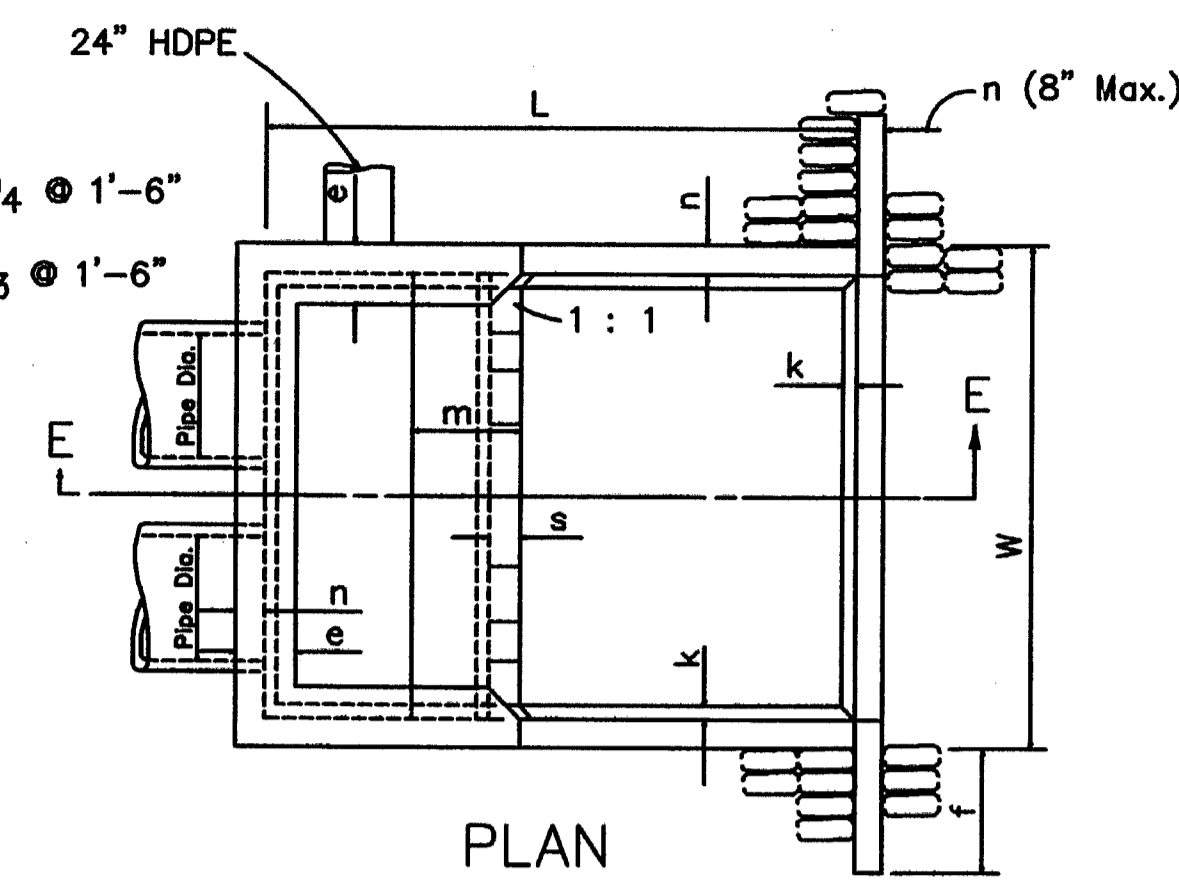
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|--|---|--|---|---|--|--|----------|
| | POST, BUCKLEY, SCHUH & JERNIGAN, INC. DB/AV PRINCIPAL ADDRESS: 2001 NW 107th AVENUE MIAMI, FL. 33172-2507 FBRP CERT. OF AUTH. No. 24 PRODUCTION ADDRESS: 2803 FRUITVILLE ROAD, SUITE 130 SARASOTA, FLORIDA 34237 Ph. (941) 954-4036 | CLIENT MANATEE COUNTY PROJECT MANAGEMENT DEPARTMENT 4410 66TH STREET WEST BRADENTON, FLORIDA 34210 | PROJECT LENA ROAD LANDFILL STORMWATER SYSTEM IMPROVEMENTS | TASK STORMWATER AUTOMATIC DISC FILTER SYSTEM DETAILS | ORIGINAL: APR. 2003 REVISIONS: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ | ENGINEER DAVID A. WEBER REG. NO. 28823 JOB NO. 100197.12 DRAWN _____ BZ DESIGNED _____ BZ CHECKED _____ BZ IN CHARGE _____ DW | SHEET 18 |
| | | | | | | | |
| | SEP 20 2005 Southwest District Tampa | | | | | | |
| | SOUTH FLORIDA REGIONAL SEWER DISTRICT | | | | | | |



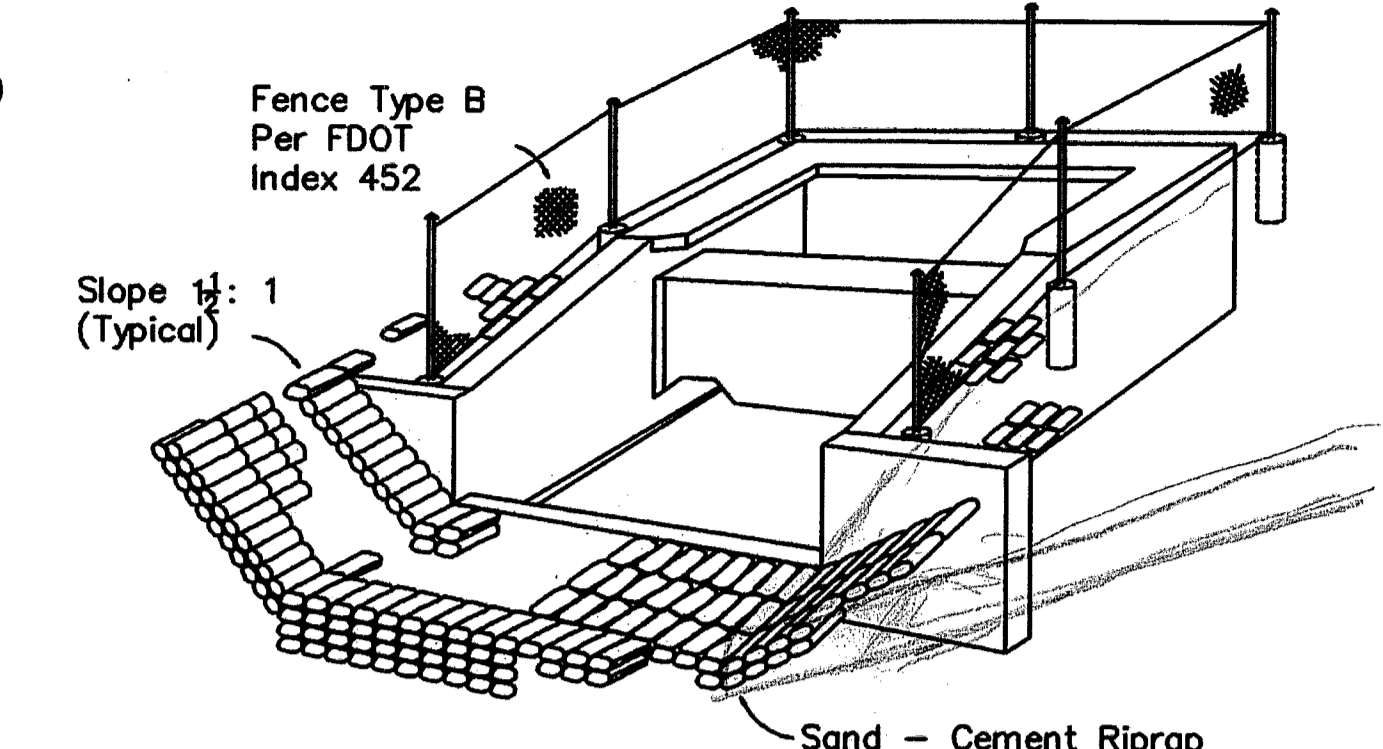
PLAN



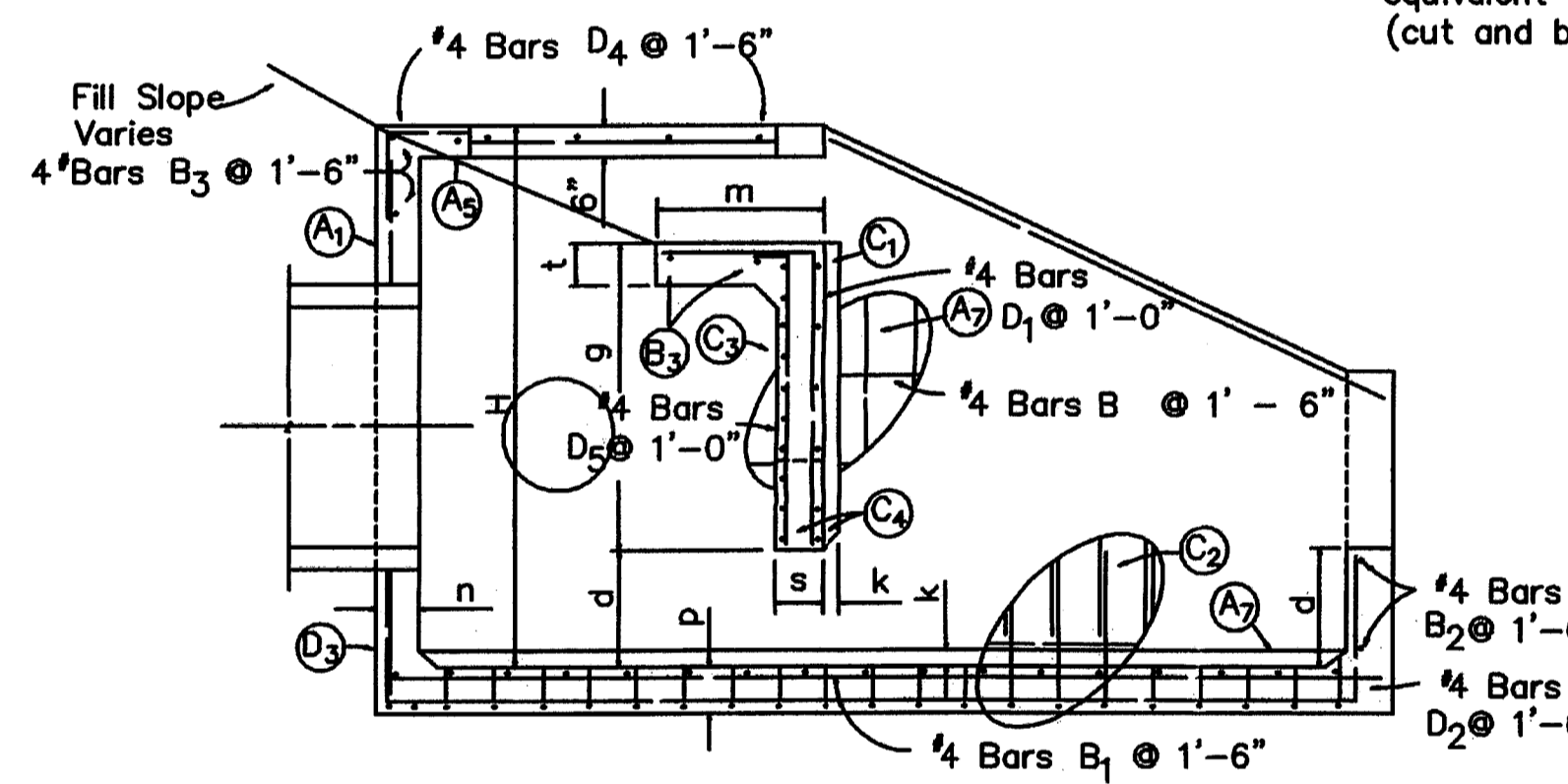
SECTION CC



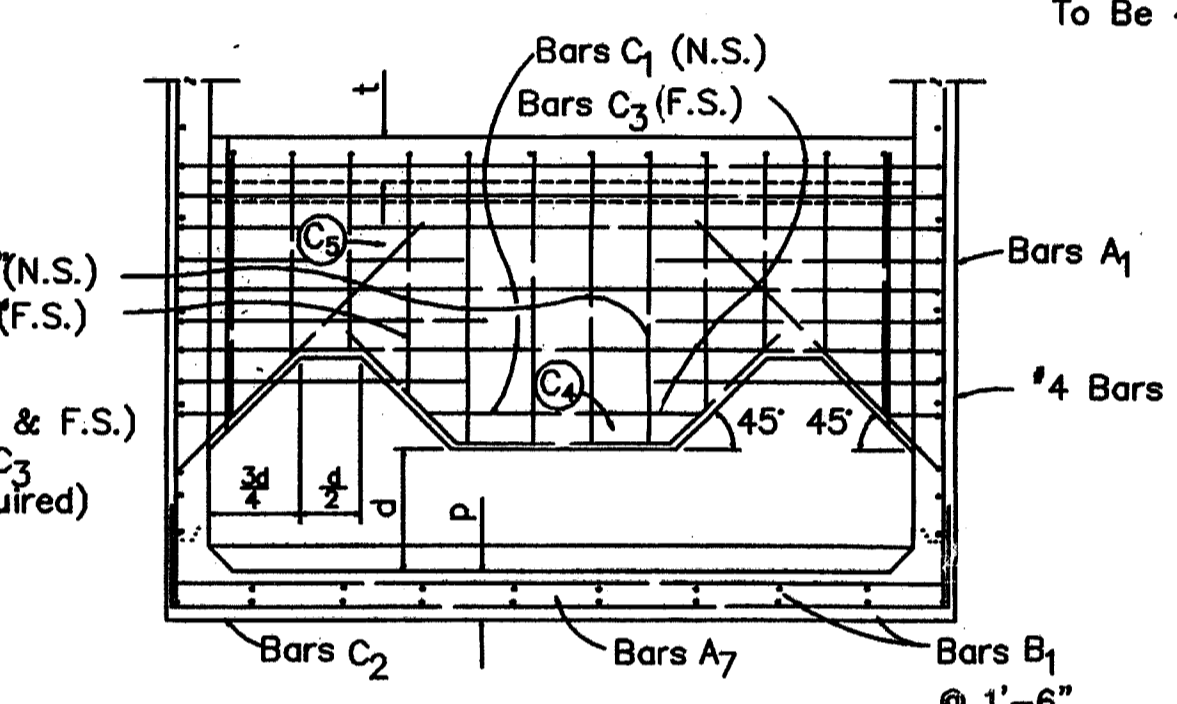
PLAN



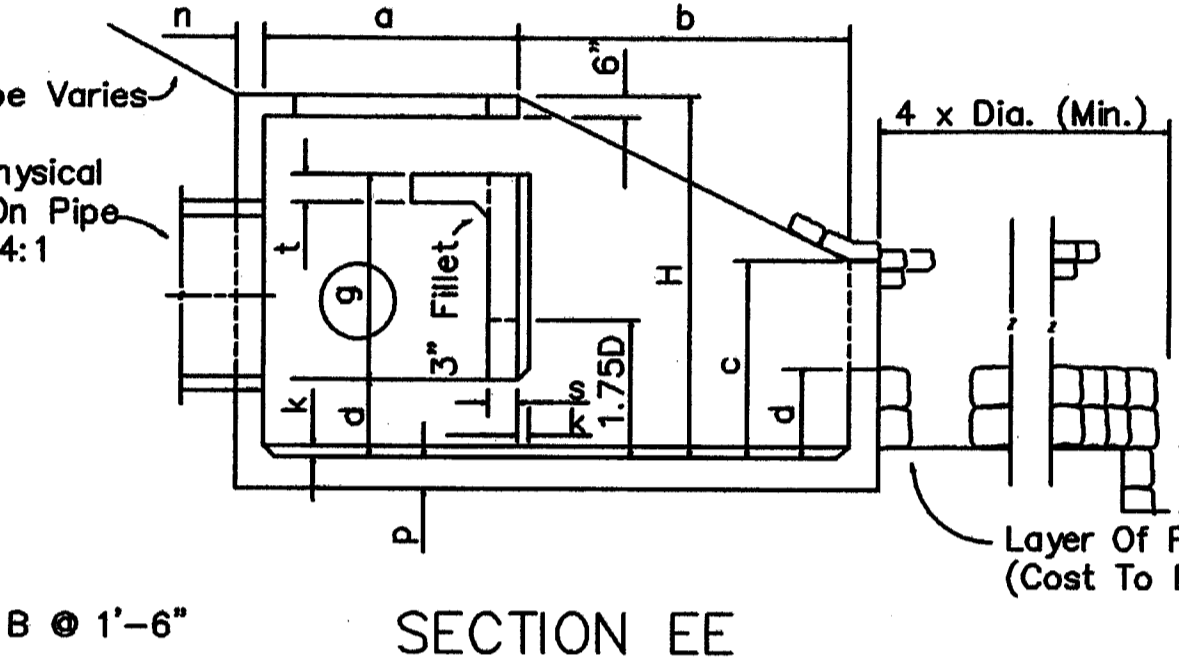
PERSPECTIVE



SECTION BB

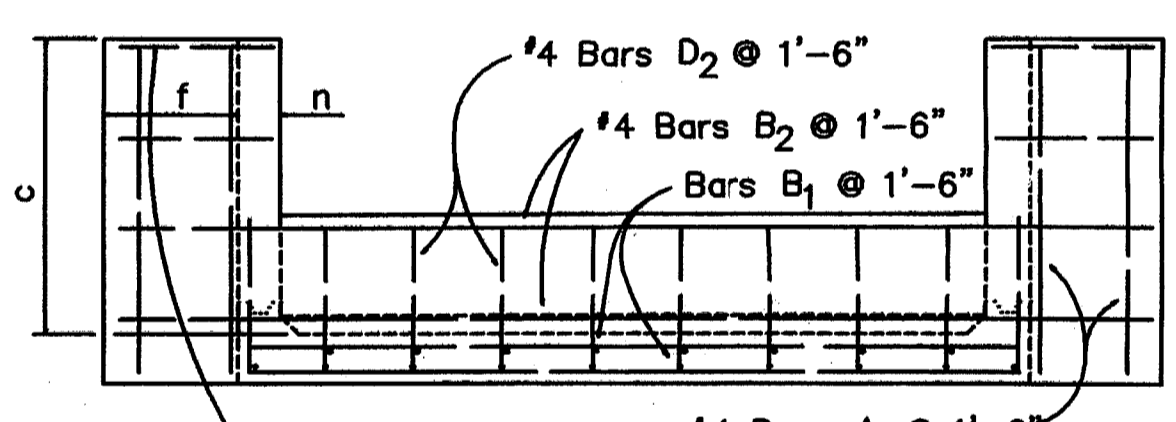


SECTION DD



SECTION EE

Note: Bars C₄ & C₅ (N.S. & F.S.) equivalent in size to C₃ (cut and bend as required)



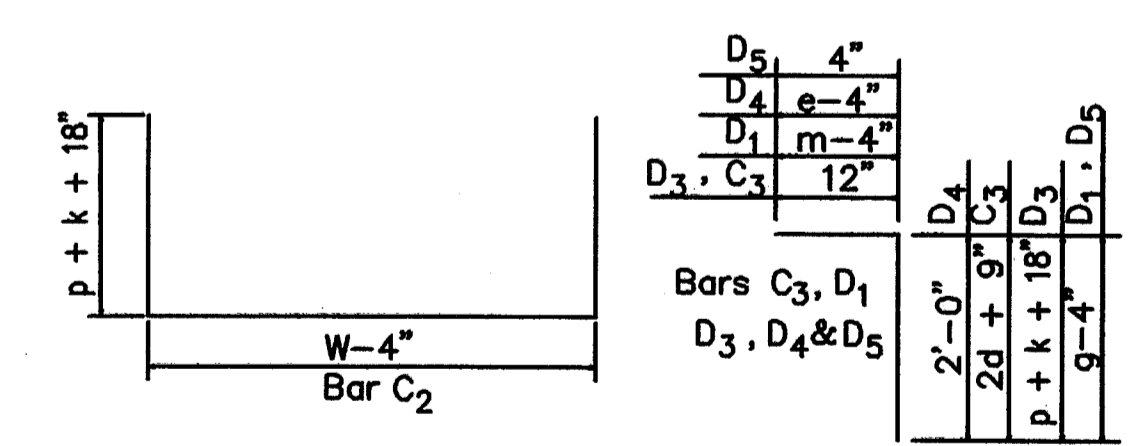
VIEW AA

| Pipe Size Dia. In. | Area S.F. | Q (Max.) (cfs) | Dimensions | | | | | | | | | | | | | Sand Cement Riprap C.Y.(Nom.) | | | |
|--------------------------|--------------|-------------------|------------|-----|------|-----|------|------|-----|-----|-----|-----|-----|----|--------|--|---|---|------|
| | | | Ft. - In. | | | | | | | | | | | | | | | | |
| | | | W | H | L | a | b | c | d | e | f | g | m | n | p | | s | t | k |
| (2)42" | 19.24 | 231 | 18-6 | 9-7 | 22-0 | 9-3 | 12-9 | 6-11 | 2-9 | 2-3 | 3-0 | 6-2 | 3-9 | 12 | 12 1/2 | 12 | 8 | 6 | 44.5 |

GENERAL NOTES

- U-type concrete endwall energy dissipators are intended for use outside the clear zone.
- Chamfer all exposed edges 3/4"
- Concrete meeting the requirements of ASTM C-478 (4000 psi) may be used in lieu of Class 1 Concrete in precast items manufactured in plants which are under the Standard Operating Procedures for the inspection of precast drainage products.
- Reinforcing steel shall have 2" min. cover.

| BARS | | | | | | | | | | | | |
|-----------|----------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|-------------------|----------------|-------------------|
| Pipe Size | A ₁ | | A ₇ | | C ₁ | | C ₂ | | C ₃ | | D ₃ | |
| | Size (No.) | Spacing (Ft.-In.) | Size (No.) | Spacing (Ft.-In.) | Size (No.) | Spacing (Ft.-In.) | Size (No.) | Spacing (Ft.-In.) | Size (No.) | Spacing (Ft.-In.) | Size (No.) | Spacing (Ft.-In.) |
| (2)42" | 6 | 0-7 1/2 | 5 | 0-10 | 7 | 0-10 | 6 | 0-7 1/2 | 7 | 0-5 | 6 | 0-7 1/2 |



Note: All bar dimensions are out to out.
BENDING DIAGM

POST, BUCKLEY, SCHUH & JERNIGAN, INC. D/B/A/
PBS&J
 PRINCIPAL ADDRESS:
 2001 NW 107th AVENUE
 MIAMI, FL 33172-2507
 FBPR CERT. OF AUTH. No. 24
 PRODUCTION ADDRESS:
 2803 FRUITVILLE ROAD, STE 130
 SARASOTA, FLORIDA 34237
 Ph. (941) 954-4036

CLIENT
 MANATEE COUNTY
 PROJECT MANAGEMENT
 DEPARTMENT
 1026 26th AVENUE EAST
 BRADENTON, FLORIDA 34208

PROJECT
 LENA ROAD LANDFILL
 STORMWATER SYSTEM IMPROVEMENTS

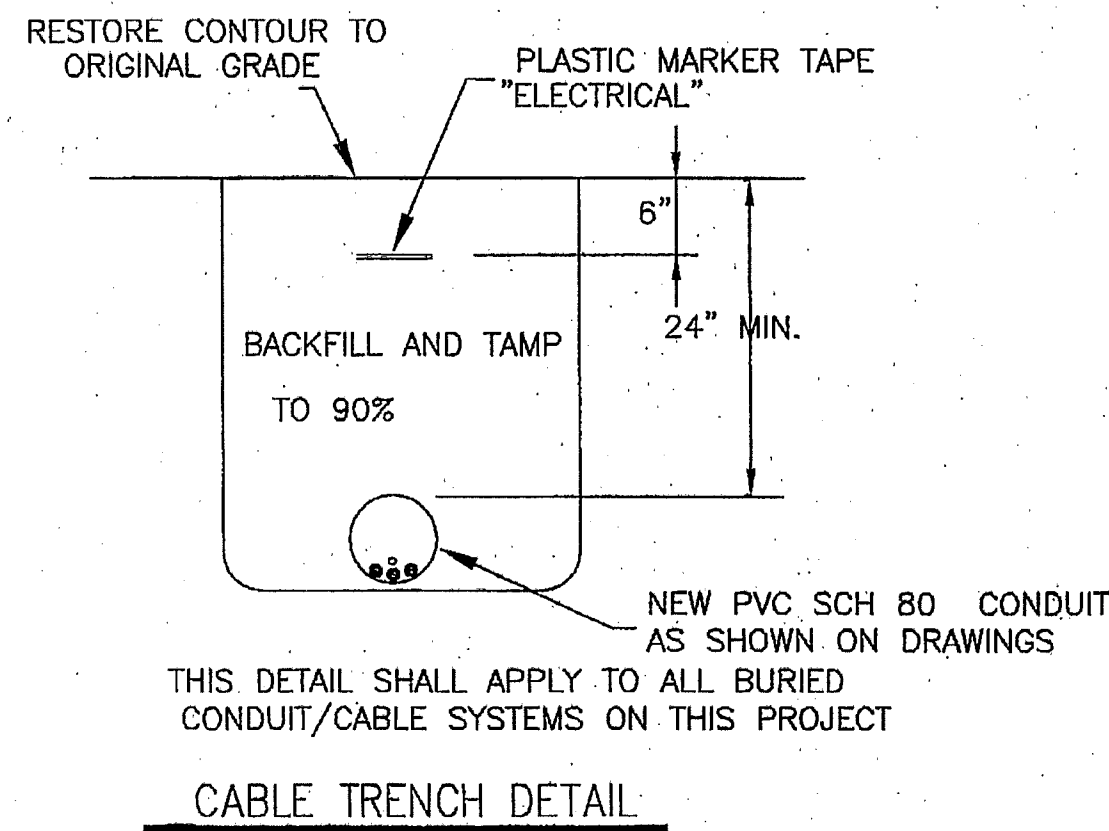
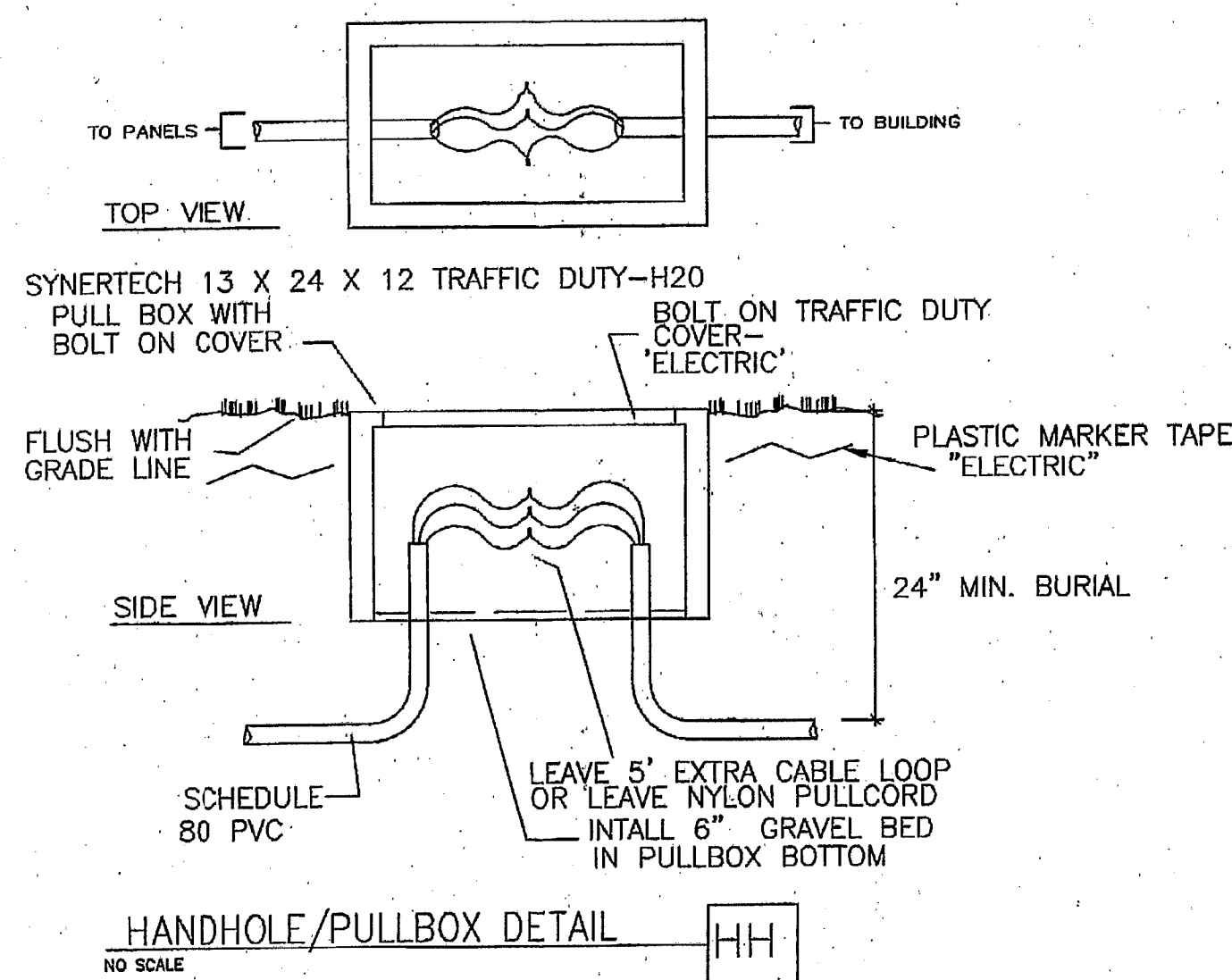
TASK
 U-TYPE CONCRETE ENDWALL
 WITH BAFFLES

ORIGINAL: JUNE, 03
 REVISIONS:
 1 SEPTEMBER, 04-SWEWMD COMMENTS
 2
 3
 4
 5

ENGINEER: JEROME M. EASH
 REG. NO. 10000
 JOB NO. 120507.10
 DRAWN: JAS
 DESIGNED: JME
 CHECKED: JME
 DATE: 09/20/05
 SHEET 19

DEP
 SEP 20 2005
 Southwest District Tampa

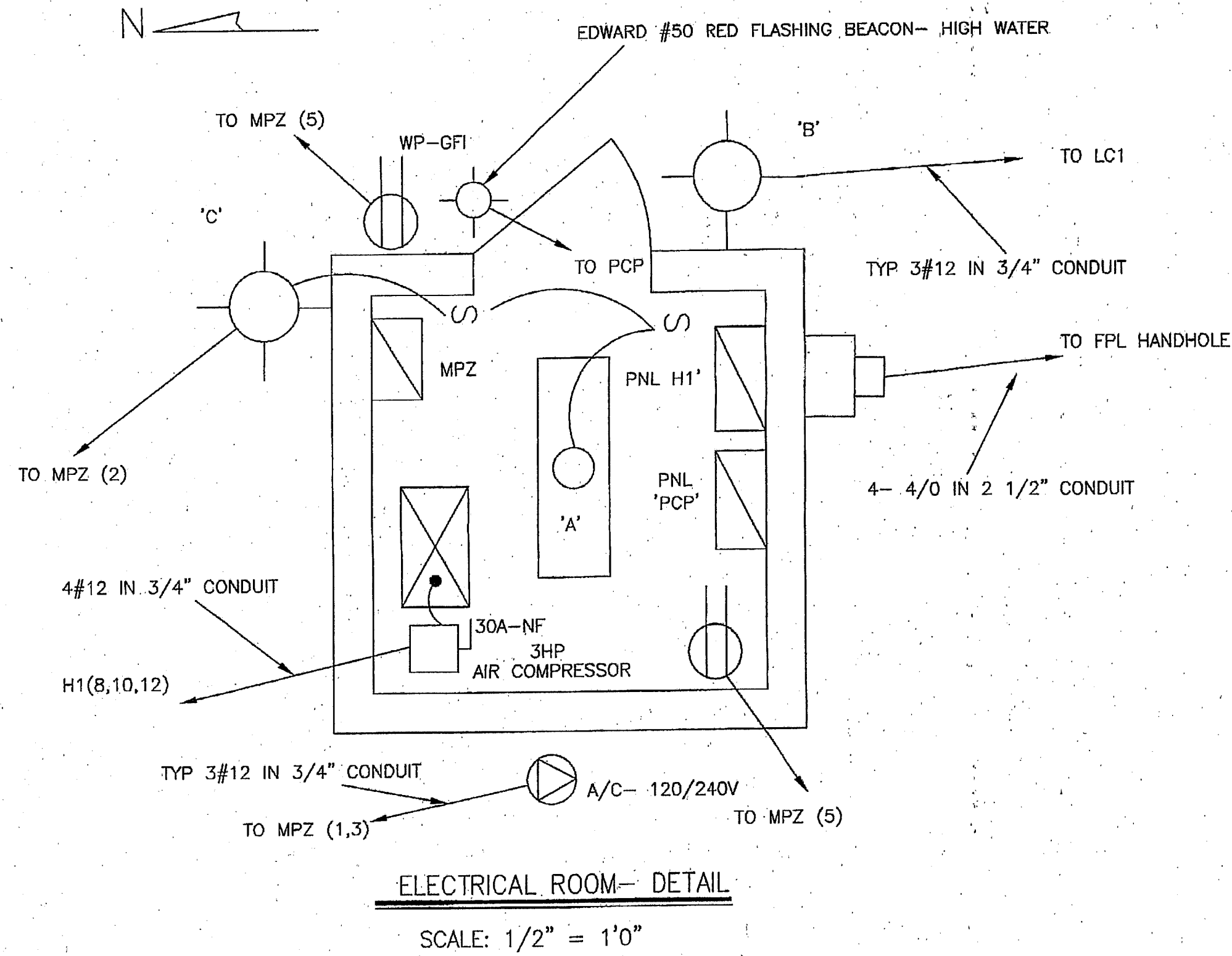
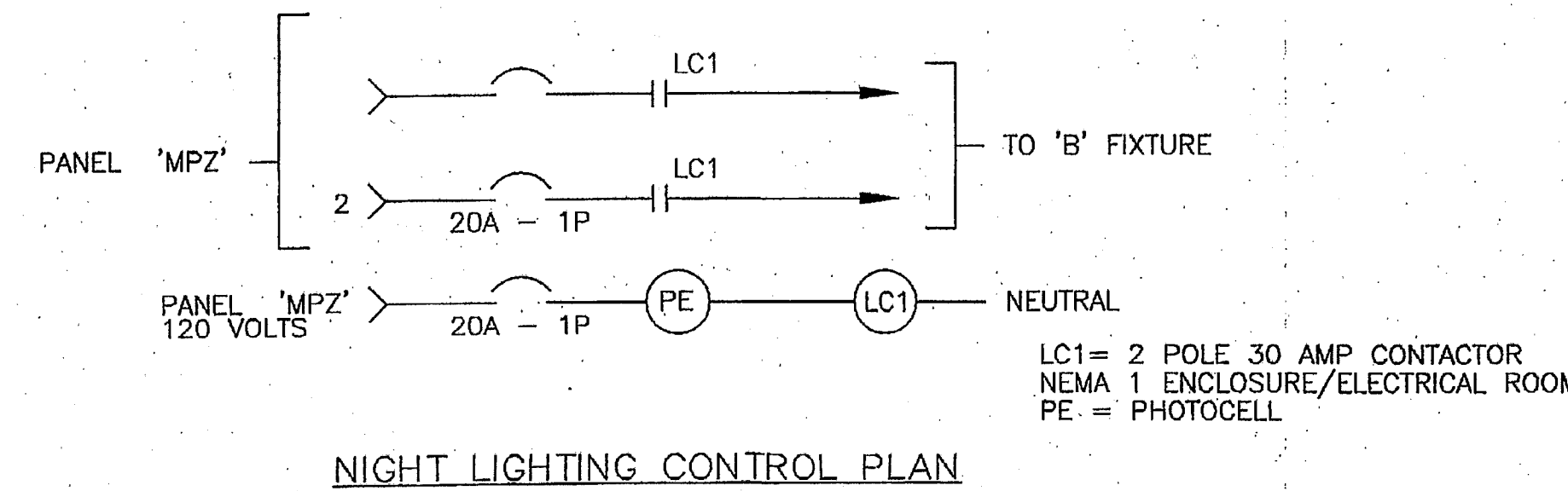
ANY SPLICES IN HANDHOLES AND PULLBOXES SHALL USE SPLIT BOLT CONNECTORS WITH TAPE AND W/ONE COAT SCOTCHCOTE AND ONE ADDITIONAL LAYER OF TAPE.



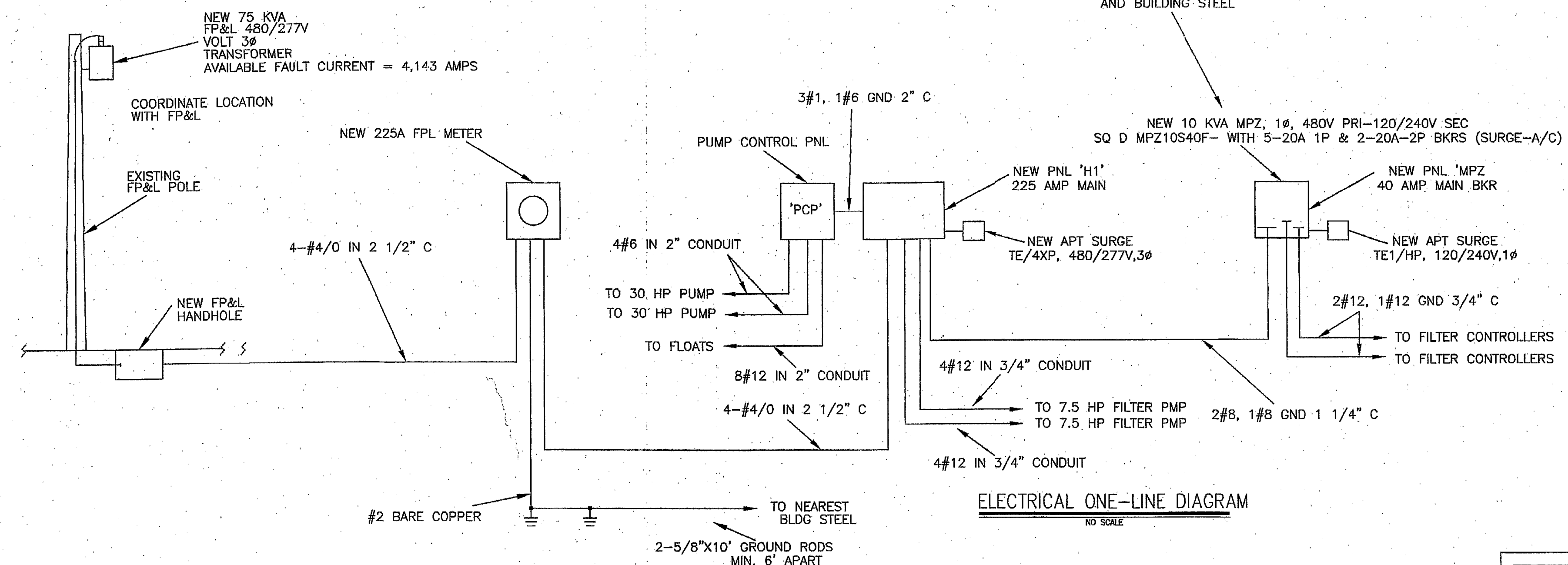
PANEL 'H1', 225 AMP MAIN, 480/277V, 3 PHASE, 4W, NEMA 1, SURFACE, 10,000 AC RATED, 30 POLES- ULSE RATED

| CKT. NO | WIRE SIZE | DESCRIPTION | BREAKERS | | | AMPS. | | | BREAKERS | | DESCRIPTION | WIRE SIZE | CKT. NO |
|---------|-----------|--------------|----------|------|----|-------|----|------|----------|------------|-------------|-----------|---------|
| | | | POLE | AMP. | A? | B? | C? | AMP. | POLE | | | | |
| 1 | 8 | TO 10KVA MPZ | 2 | 40 | 30 | - | - | 125 | 3 | TO PCP PNL | 1 | 2 | |
| 3 | 8 | " | - | - | - | 30 | - | - | - | "- 60 HP | 1 | 4 | |
| 5 | 6 | SURGE | 3 | 50 | - | - | 30 | - | - | " | 1 | 6 | |
| 7 | 6 | " | - | - | - | - | - | 15 | 3 | AIR COMPR | 12 | 8 | |
| 9 | 6 | " | - | - | - | - | - | - | - | " | 12 | 10 | |
| 11 | 12 | TO 7.5-HP | 3 | 20 | - | - | - | - | - | " | 12 | 12 | |
| 13 | 12 | "- FILTR #1 | - | - | - | - | - | - | - | " | - | 14 | |
| 15 | 12 | " | - | - | - | - | - | - | - | " | - | 16 | |
| 17 | 12 | TO 7.5-HP | 3 | 20 | - | - | - | - | - | " | - | 18 | |
| 19 | 12 | "- FILTR #2 | - | - | - | - | - | - | - | " | - | 20 | |
| 21 | 12 | " | - | - | - | - | - | - | - | " | - | 22 | |
| 23 | - | " | - | - | - | - | - | - | - | " | - | 24 | |
| 25 | - | " | - | - | - | - | - | - | - | " | - | 26 | |
| 27 | - | " | - | - | - | - | - | - | - | " | - | 28 | |
| 29 | - | " | - | - | - | - | - | - | - | " | - | 30 | |

| TYPE | DESCRIPTION | MANUFACTURER CAT. NO. | VOLTAGE | LAMPS | MOUNTING |
|------|------------------------------------|--------------------------|---------|---------------|-------------------------------------|
| A | CEILING MOUNT 4' 4 LAMP FL FIXTURE | LITHONIA VC432-120V- GEB | 120V | 4-32 W FL- T8 | CEILING MOUNT ACRYLIC LENS LENS |
| B | OUTSIDE WALL LIGHT | LITHONIA TWR1-120 | 120V | 70W HPS | WALL- 8' ABOVE GRADE PE CELL ON/OFF |
| C | OUTSIDE WALL LIGHT | LITHONIA TWR1-120 | 120V | 150W HPS | WALL- 8' ABOVE GRADE SWITCH ON/OFF |

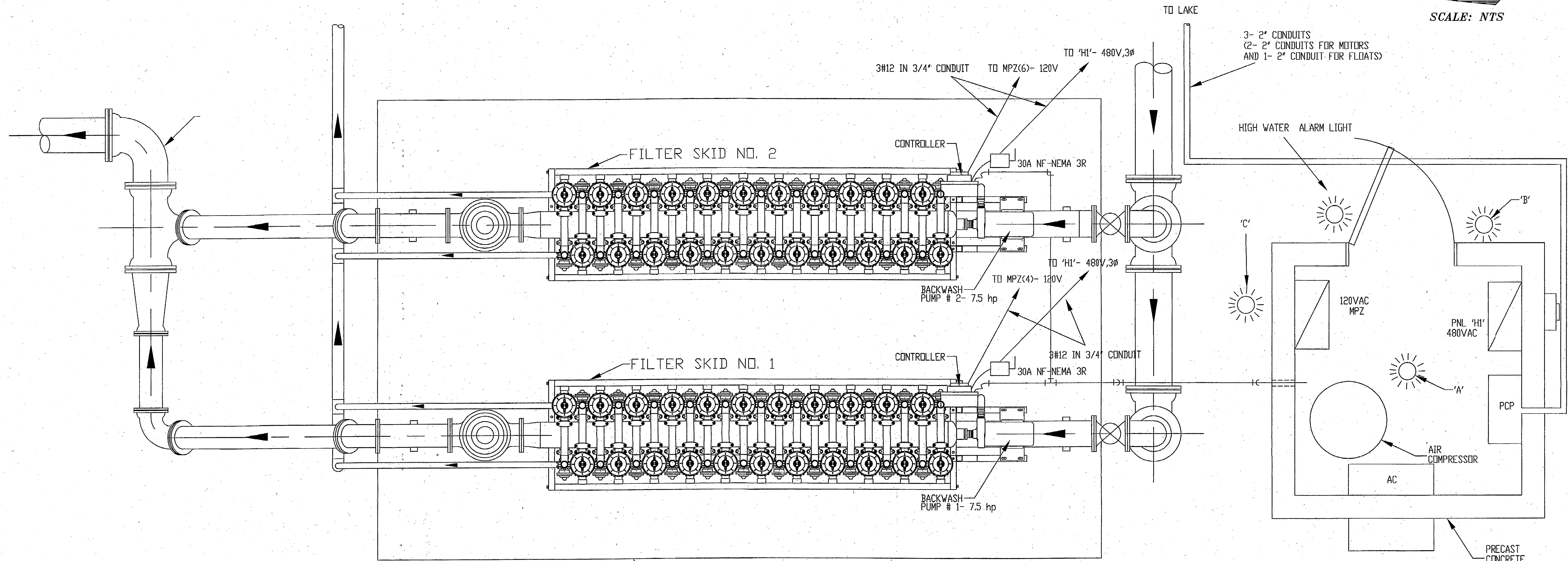


NOTE: PROVIDE 3' 6" MIN. CLEARANCE IN FRONT OF PNL 'PCP' AND 'H1'



ELECTRICAL ONE-LINE DIAGRAM

Edward W. Smith, P.E.
 (941) 476-1885
 FAX (941) 697-9606
Smith Engineering Inc.
 Consulting Engineers #3267
 Power Communications Lighting
 Controls Energy
 P. O. Box 3811 Placida, Fla. 33946



SLAB ELEV. 39'

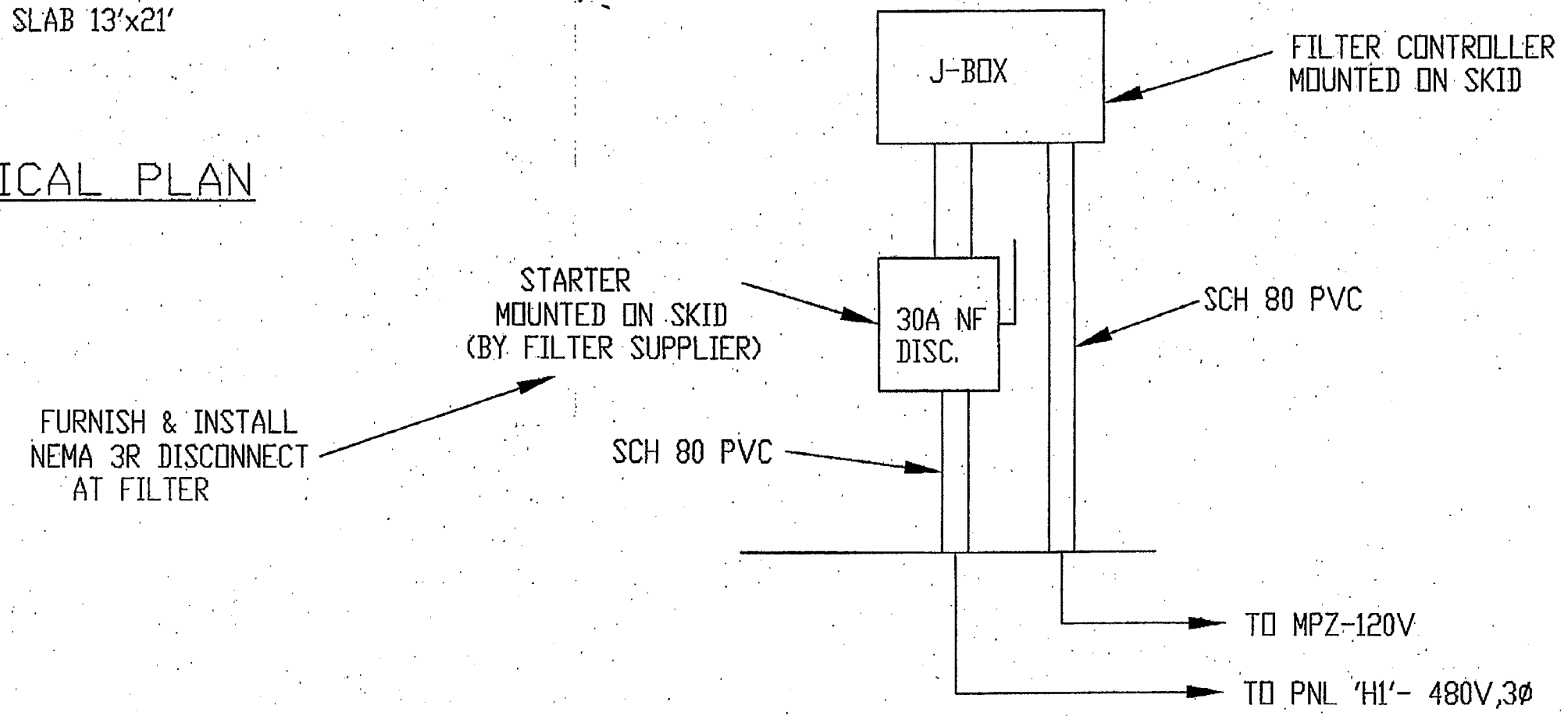
CONCRETE SLAB 13'x21'

NOTE: PROVIDE 3' 6" MIN. CLEARANCE IN FRONT OF PNL 'PCP' AND 'HI'

PRECAST CONCRETE BUILDING SEE DWG E-1

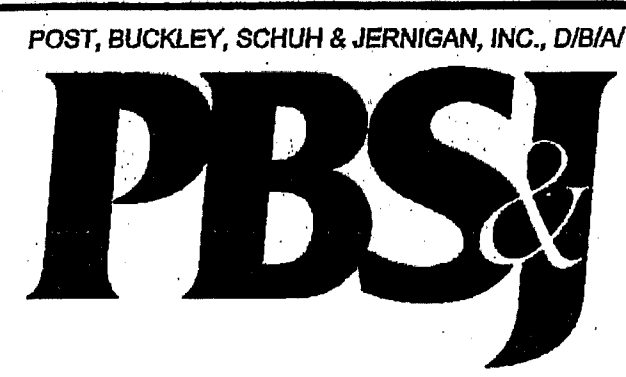
FILTER ELECTRICAL PLAN

NO SCALE



FILTER ELECTRICAL CONNECTIONS

NO SCALE



PRINCIPAL ADDRESS:
2001 MW 107th AVENUE
MIAMI, FL. 33172-2507
FBRP CERT. OF AUTH. No. 24

PRODUCTION ADDRESS:
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Ph. (941) 954-4036

CLIENT
**MANATEE COUNTY
PROJECT MANAGEMENT
DEPARTMENT**

4410 66TH STREET WEST
BRADENTON, FLORIDA 34210

PROJECT
**LENA ROAD LANDFILL
STORMWATER SYSTEM IMPROVEMENTS**

TASK
**STORMWATER
AUTOMATIC DISC FILTER SYSTEM
ELECTRICAL PLAN**

ORIGINAL: APR. 2003
REVISIONS:
1 _____
2 _____
3 _____
4 _____
5 _____

6 _____
7 _____
8 _____
9 _____
10 _____
11 _____
12 _____

ENGINEER:
EDWARD W. SMITH
REG. NO. 21074

JOB NO. 100197.12
DRAWN EWS
DESIGNED EWS
CHECKED EWS
QC DW
SHEET E-2

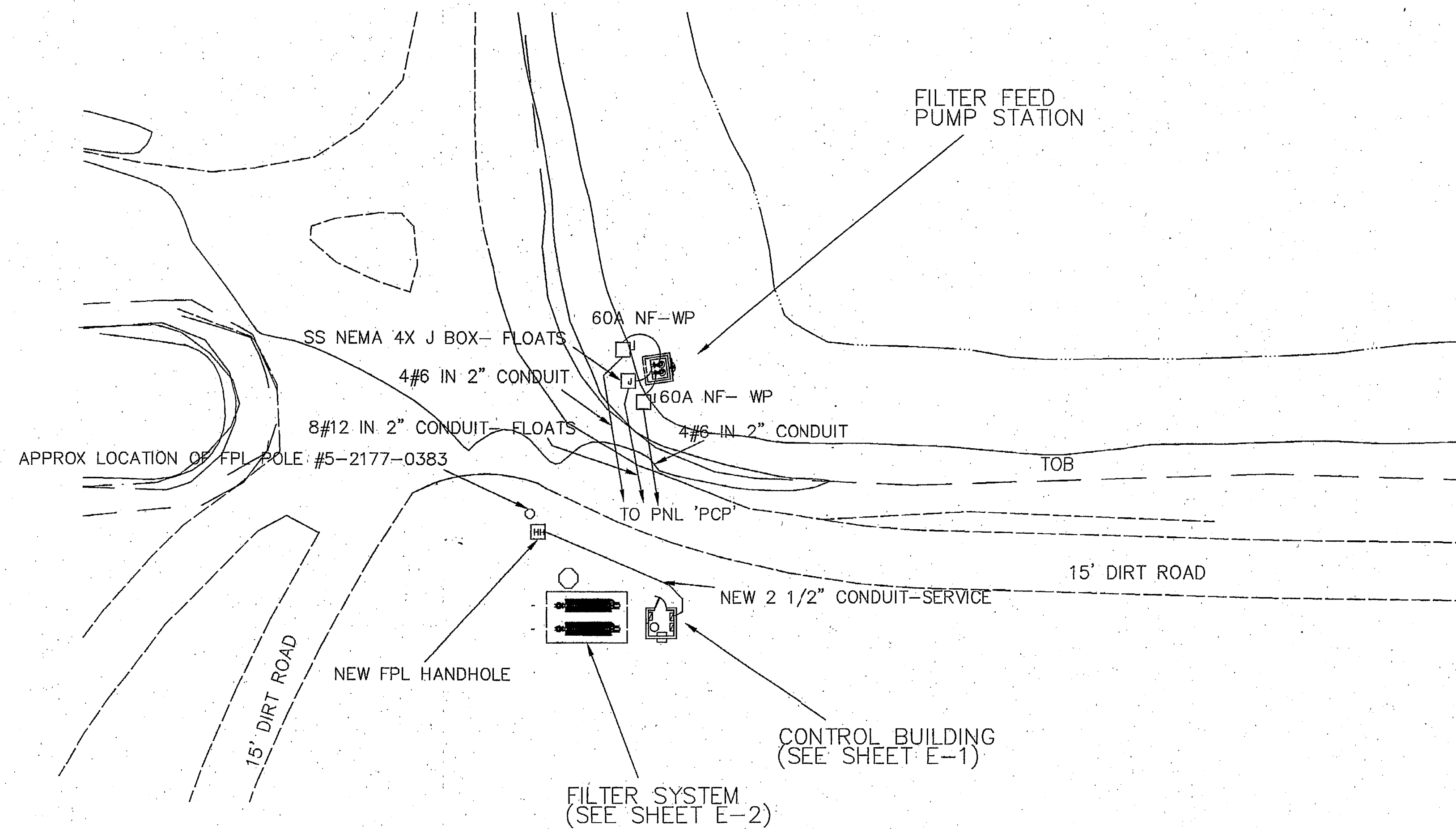
Edward W. Smith, P.E.
(941) 475-1885
FAX (941) 697-9606

Smith Engineering, Inc.
Consulting Engineers #3267

Power Communications Lighting
Controls Energy
P. O. Box 3811 Placida, Fla. 33946

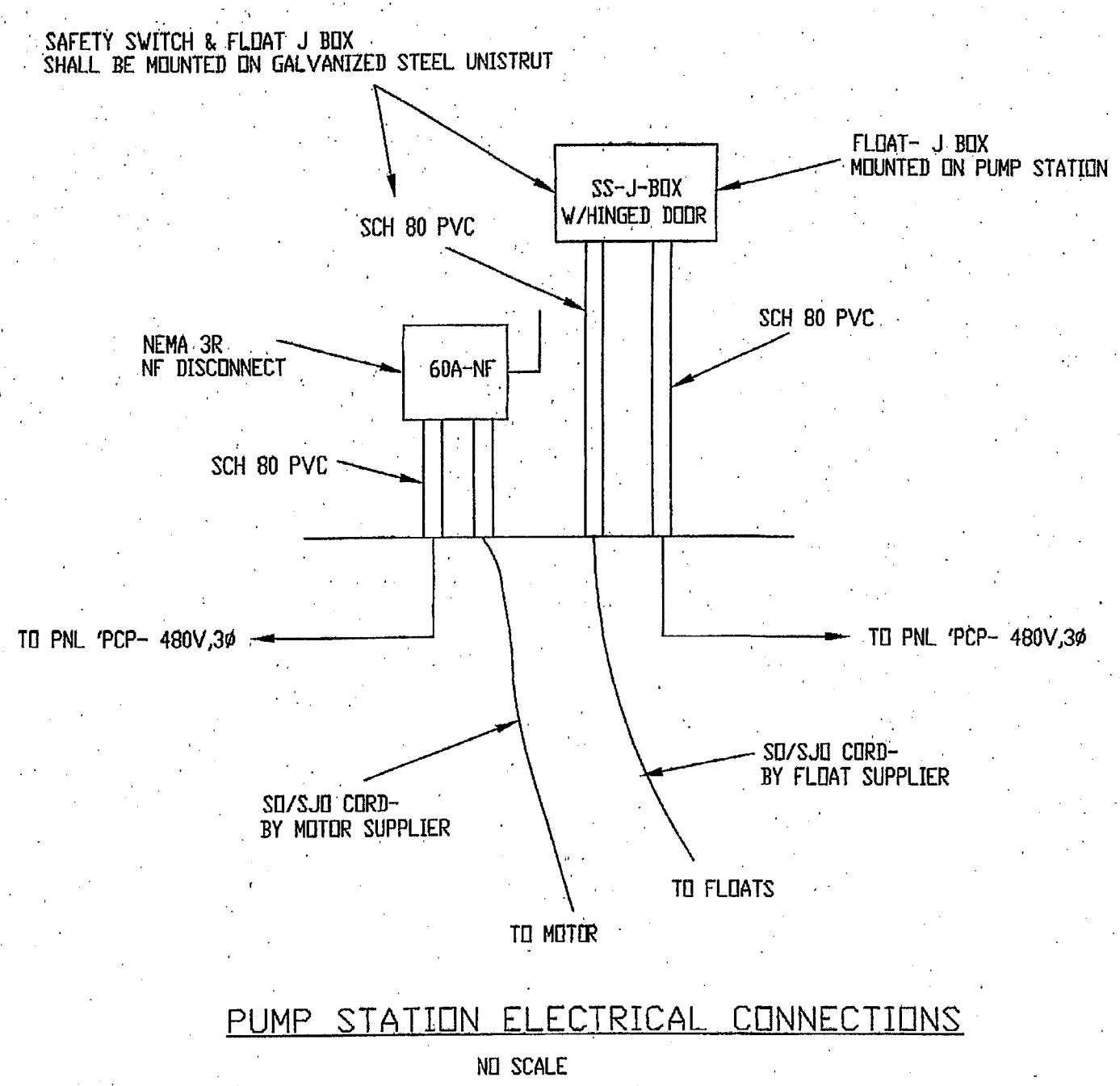
DEP.
SEP 20 2005
Southwest District Tampa

| ELECTRICAL LEGEND | |
|-------------------|---|
| SYMBOL | DESCRIPTION |
| | SINGLE GANG SWITCH, HUBBELL/LEVITON/PASS, AND SEYMOUR, SINGLE GANG, NYLON WHITE 42" A.F.F., NYLON IVORY COVER, SPEC. GRADE TYPE, 20 AMP |
| | THREE WAY SWITCH, HUBBELL/LEVITON/PASS, AND SEYMOUR, THREE WAY, 42" A.F.F., NYLON IVORY COVER, SPEC. GRADE TYPE, 20 AMP |
| | SIMPLEX OUTLET, HUBBELL/LEVITON/PASS, AND SEYMOUR, 4" SQUARE BOX, SPEC GRADE 16" A.F.F., NYLON IVORY COVER PLATE, 20 AMPS |
| | DUPLEX OUTLET, HUBBELL/LEVITON/PASS, AND SEYMOUR, 4" SQUARE BOX, SPEC GRADE 16" A.F.F., NYLON IVORY COVER PLATE, 20 AMPS |
| | DUPLEX OUTLET, HUBBELL/LEVITON/PASS, AND SEYMOUR, 4" SQUARE BOX, SPEC GRADE 42" A.F.F., NYLON IVORY COVER PLATE, 20 AMPS |
| | DUPLEX OUTLET GROUND FAULT- WP, HUBBELL/LEVITON, /OUTLET, WEATHERPROOF COVER, SPEC GRADE, 16" A.F.F. |
| | DOUBLE GANG DUPLEX OUTLET- 16" A.F.F., NYLON IVORY COVER SPEC GRADE, 20 AMPS |
| | SAME AS ABOVE- EXCEPT 42" A.F.F. |
| | LIGHTING FIXTURE- SEE SCHEDULE |
| | PANEL BOARD -- DESIGNATED, MOUNT AS SHOWN ON DRAWINGS |
| | MOTOR, LOAD-DESIGNATED, CONNECTION BY ELECTRICAL CONTRACTOR |
| | HOME RUN- SEE DRAWINGS |
| | HEAVY DUTY FUSED/NON FUSED SAFETY SWITCH DISCONNECT SIZE/FUSE SIZE AS REQUIRED |
| | 2x4 FIXTURE 3 F-40 CW FLUORESCENT LAMPS, 120 V, CLR FUSING, STATIC, ELECTRONIC BALLAST, SEE SCHEDULE |
| | TELEPHONE - 4" SQ. BOX, TELEPHONE OUTLET FOR FUTURE AT & T 100 INSTRUMENT -3/4" CONDUIT TO 6" ABOVE CEILING, 2 #22 SHIELDED TO PANEL |
| | EXIT SIGN- SEE FIXTURE SCHEDULE |
| | EMERGENCY LIGHT W/BATTERY PACK |
| | SPECIAL OUTLET -SEE DRAWINGS FOR DETAILS |
| | MOTOR LOAD-SEE DRAWINGS |
| | HANDHOLE- SEE DRAWINGS |



ELECTRICAL NOTES

- ALL ELECTRICAL CONTRACTING WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE WITH LOCAL AMENDMENTS.
- DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS ON CIVIL ENGINEERING DRAWINGS OR BY ACTUAL FIELD MEASUREMENT.
- ELECTRICAL CONTRACTOR IS ENCOURAGED TO VISIT SITE TO BETTER ESTIMATE THE SCOPE OF WORK.
- MINOR DETAILS, NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR PROPER OPERATION, CONSISTENT WITH GOOD WORKMANSHIP, SHALL BE INCLUDED IN ESTIMATE, THE SAME AS IF SHOWN ON DRAWINGS.
- PRIOR TO ROUGH IN, OWNER/ENGINEER RESERVE THE RIGHT TO RELOCATE ANY OUTLET OR DEVICE 10' IN ANY DIRECTION WITHOUT ANY EXTRA CHARGES.
- ALL ELECTRICAL CONTRACTING WORK SHALL BE GUARANTEED ONE YEAR FROM DATE OF ACCEPTANCE BY OWNER.
- COORDINATE ALL WORK WITH FLORIDA POWER AND LIGHT (KEN SAULS TELE. 941-739-3312).
- ALL WIRE ON PROJECT SHALL BE COPPER - THHN/THWN
- USE SCHEDULE 80 PVC FOR THE ENTIRE PROJECT- ABOVE & BELOW GROUND.
- THESE DOCUMENTS HAVE BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. THE CONSULTANT HAS NOT VERIFIED THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY BE INCORPORATED AS A RESULT OF ERRONEOUS INFORMATION PROVIDED BY OTHERS.



ELECTRICAL SITE PLAN
SCALE- 1" = 20'

SERVICE LOAD CALCULATION

| DESCRIPTION | AMPS |
|---|-----------------|
| 2-30 HP PUMPS @40 AMPS EA.- 480V | = 80 |
| 2- 7.5 HP FILTER PUMPS @ 11 AMPS EA.-480V | = 22 |
| 25% LARGEST LOAD-30 HP -40 AMPS X 0.25 | = 10 |
| TOTAL LOAD | 112 AMPS |

INSTALL 225 AMP FEEDER @ 480V, 3#

SEP 20 2005
Southwest District

Edward W. Smith, P.E.
(941) 475-1885
FAX (941) 697-9606
Smith Engineering, Inc.
Consulting Engineers #3267
Power Communications Lighting
Controls Energy
P. O. Box 3811 Placida, Fla. 33946



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FBRP CERT. OF AUTH. No. 24
PRODUCTION ADDRESS:
330 S. PINEAPPLE AVE., STE. 113
SARASOTA, FLORIDA 34236
Ph. (941) 954-4036

CLIENT
MANATEE COUNTY PROJECT MANAGEMENT DEPARTMENT
4410 66TH STREET WEST
BRADENTON, FLORIDA 34210

PROJECT
LENA ROAD LANDFILL
STORMWATER SYSTEM IMPROVEMENTS

TASK
STORMWATER
ELECTRICAL SITE PLAN

ORIGINAL: FEB. 2003
REVISIONS:
1 _____
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12 _____

ENGINEER:
EDWARD W. SMITH
REG. NO. 21074

JOB NO. 100197.12
DRAWN EWS
DESIGNED EWS
CHECKED EWS
QC DW
SHEET E-3