

LEGEND

- PROPERTY BOUNDARY
- EXISTING SOLID WASTE BOUNDARY
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- EXISTING LANDFILL GAS HEADER
- EXISTING LFG EXTRACTION WELL
- EXISTING LFG EXTRACTION WELL - COMBO
- EXISTING REMOTE WELLHEAD
- EXISTING HEADER ACCESS RISER
- EXISTING CONTROL VALVE
- EXISTING BLIND FLANGE
- EXISTING FLANGE CONNECTION
- EXISTING REDUCER FITTING
- EXISTING CONDENSATE DRIPLEG
- EXISTING CONDENSATE PUMP STATION
- EXISTING ROAD CROSSING
- EXISTING HEADER HIGH POINT
- EXISTING GAS MONITORING PROBE
- EXISTING LEACHATE CLEANOUT RISER
- EXISTING J-TRAP
- EXISTING J-TRAP ACCESS RISER
- APPROXIMATE LIMITS OF ASBESTOS (SEE NOTE 4)

NOTES:

- NORTHING AND EASTING COORDINATES SHOWN REPRESENT FLORIDA STATE PLANE EAST ZONE NORTH AMERICAN DATUM OF 1983 (NAD83).
- THE ELEVATIONS SHOWN REPRESENT NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29)(FEET).
- TOPOGRAPHIC INFORMATION SHOWN PROVIDED BY BASE MAPPING CO. LTD BASED ON AN AERIAL PHOTOGRAPH TAKEN ON 20 MAY 2015.
- LOCATION OF EXISTING LANDFILL GAS COLLECTION AND CONTROL SYSTEM COMPONENTS TAKEN FROM GOLDER ASSOCIATES DRAWING "COMBINED AS-BUILT SURVEY, FIGURE 1" DATED 05/23/2016.

PERMITTING

cornerstone
environmental

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DONALD E. HULLINGS, P.E.

6/10/2016

FL.P.E. Lic. No. 65058 Date

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06/10/16

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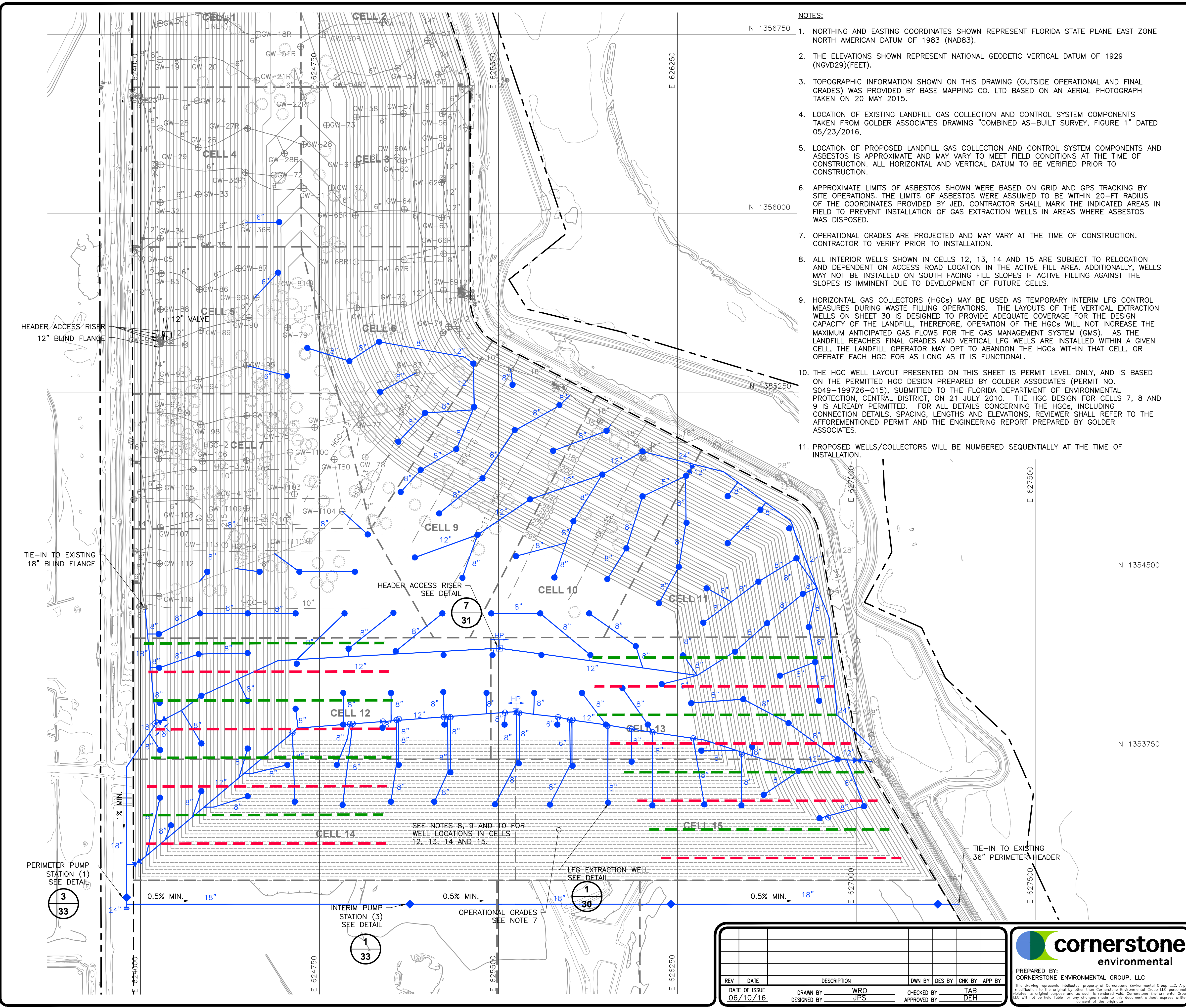
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J.E.D. SOLID WASTE MANAGEMENT FACILITY
ST. CLOUD, FLORIDA

PHASES 1-5 RENEWAL PERMIT DRAWINGS
GAS MANAGEMENT SYSTEM PLAN I



SHEET NO.
28

PROJECT NO.
160353

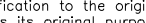


- LEGEND**

	PROPERTY BOUNDARY
	EXISTING SOLID WASTE BOUNDARY
	INTERIM 5' CONTOUR
	OPERATIONAL 5' CONTOUR
	EXISTING LANDFILL GAS HEADER
	EXISTING LFG EXTRACTION WELL
	EXISTING LFG EXTRACTION WELL – COMBO
	EXISTING REMOTE WELLHEAD
	EXISTING HEADER ACCESS RISER
	EXISTING CONTROL VALVE
	EXISTING BLIND FLANGE
	EXISTING FLANGE CONNECTION
	EXISTING REDUCER FITTING
	EXISTING CONDENSATE DRIPLEG
	EXISTING CONDENSATE PUMP STATION
	EXISTING ROAD CROSSING
	EXISTING HEADER HIGH POINT
	EXISTING GAS MONITORING PROBE
	EXISTING LEACHATE CLEANOUT RISER
	EXISTING J-TRAP
	EXISTING J-TRAP ACCESS RISER
	EXISTING WOOD POWERPOLE
	APPROXIMATE LIMITS OF ASBESTOS (SEE NOTE 4)
	PROPOSED LANDFILL GAS HEADER
	PROPOSED UPPER TIER HORIZONTAL COLLECTOR
	PROPOSED LOWER TIER HORIZONTAL COLLECTOR
	PROPOSED LFG EXTRACTION WELL
	PROPOSED LFG EXTRACTION WELL REDRILL
	PROPOSED CONTROL VALVE
	PROPOSED HEADER ACCESS RISER
	PROPOSED HEADER HIGH POINT
	PROPOSED CONDENSATE PUMP STATION

 <div style="display: inline-block; vertical-align: middle; text-align: center;"> <p>cornerstone environmental</p> <p>201 E. PINE STREET, SUITE 1000 ORLANDO, FLORIDA, 32801 Tel. (877) 633-5520 Fax. (630) 791-9003</p> </div>	
<p>DONALD E. HULLINGS, P.E.</p>	
	
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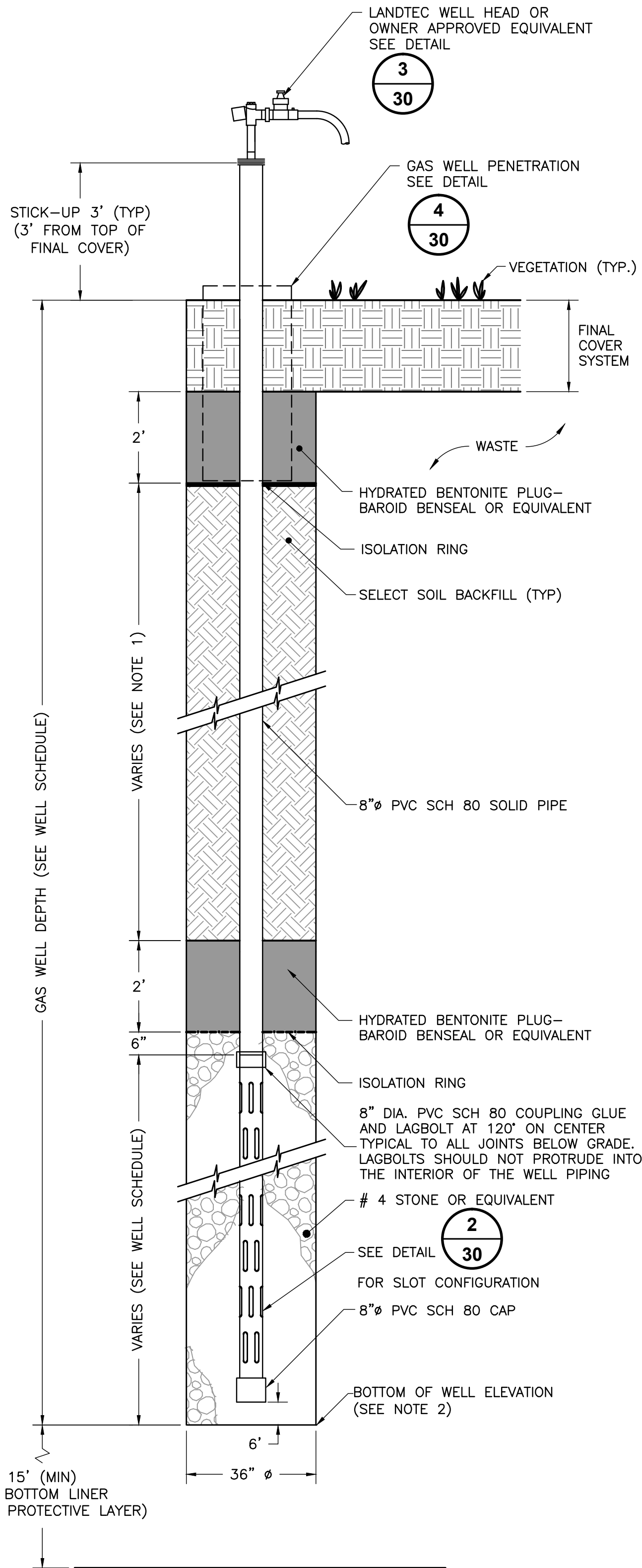
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J.E.D. SOLID WASTE MANAGEMENT FACILITY
ST. CLOUD, FLORIDA

**PHASES 1-5 RENEWAL PERMIT DRAWINGS
GAS MANAGEMENT SYSTEM PLAN II**

SHEET NO.
29
PROJECT NO.
160353



VERTICAL EXTRACTION WELL

DETAIL

SCALE: NOT TO SCALE

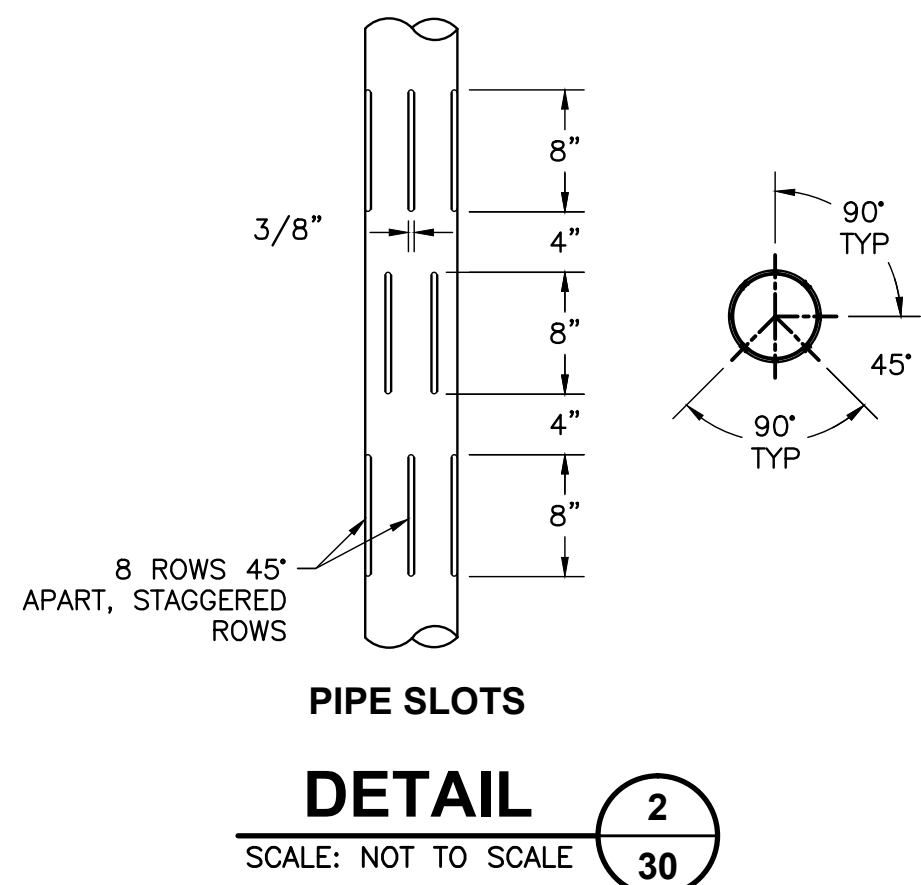
1
30

NOTES:

1. THE LENGTH OF SOLID PIPE EXTENDING BELOW THE FINAL COVER GEOMEMBRANE SHALL BE NO LESS THAN 20 FEET.
2. BOTTOM ELEVATION OF ALL GAS EXTRACTION WELLS SHALL BE MINIMUM 15' FROM THE BOTTOM LINER (TOP OF PROTECTIVE COVER LAYER).

NOTE:

1. DETAILS ARE TYPICAL AND MAY VARY TO ACCOMMODATE FIELD CONDITIONS AND LOCATIONS AT THE TIME OF INSTALLATION.

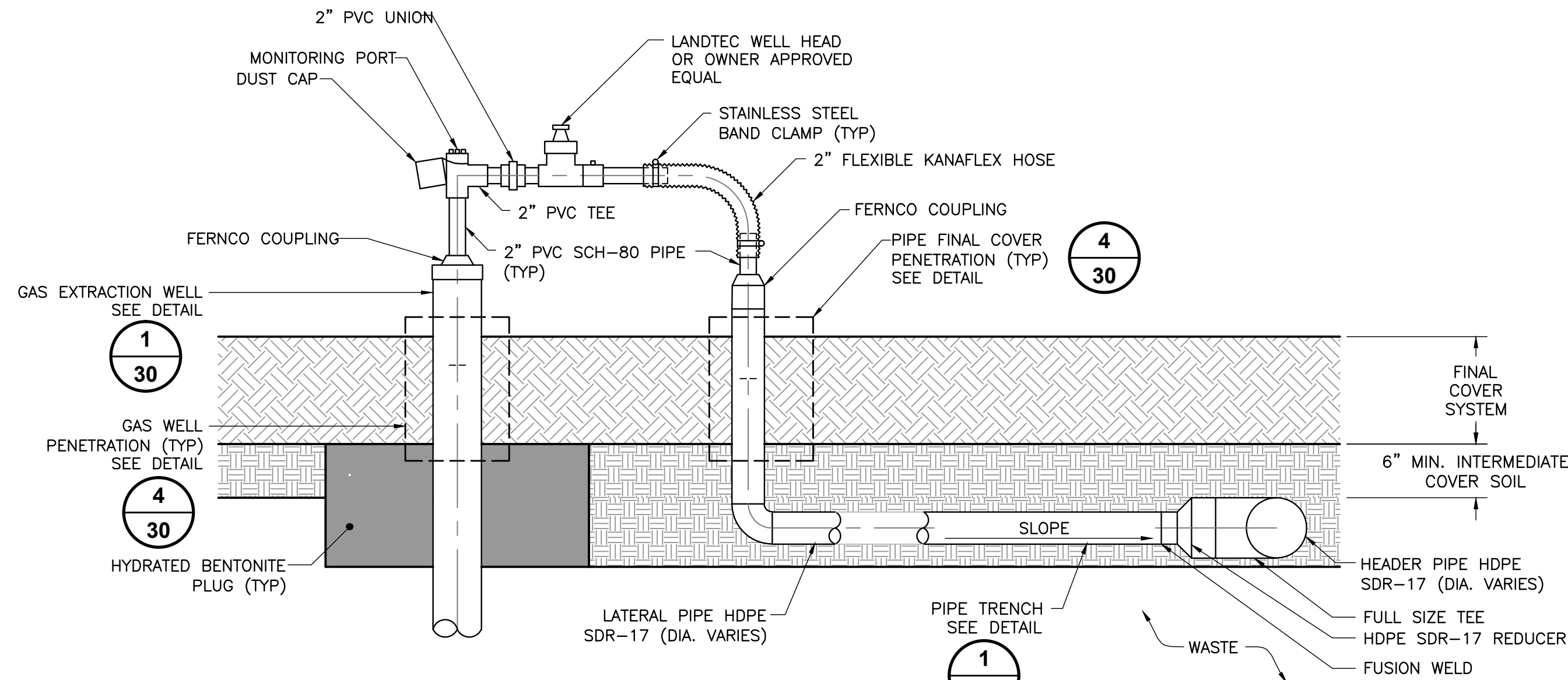


PIPE SLOTS

DETAIL

SCALE: NOT TO SCALE

2
30

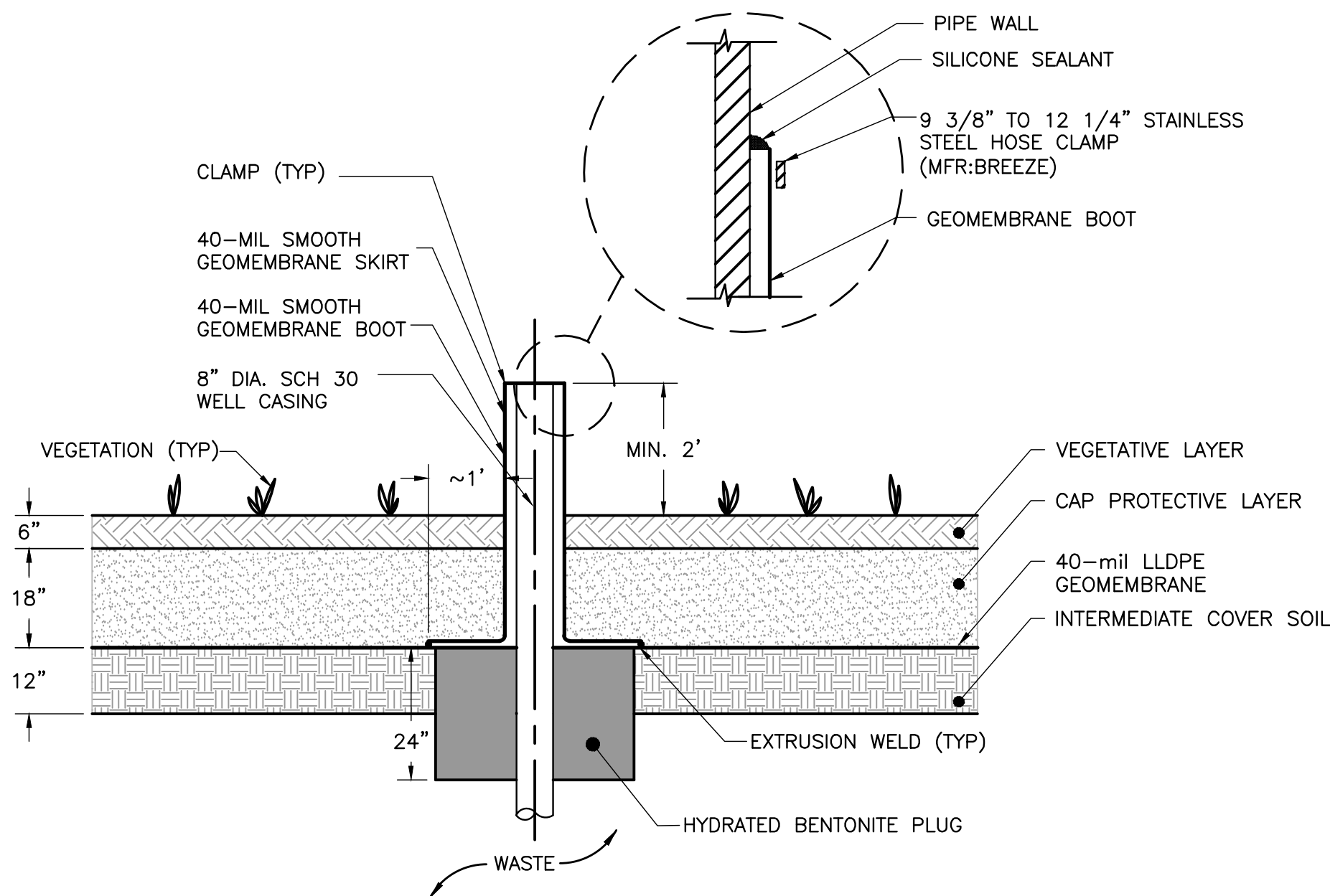


WELLHEAD TO LATERAL

DETAIL

SCALE: NOT TO SCALE

3
30



GAS WELL FINAL COVER PENETRATION

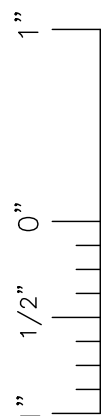
DETAIL

SCALE: NOT TO SCALE

4
30

NOTE:

1. ALTERNATE DESIGN MAY BE USED AT TIME OF CONSTRUCTION.



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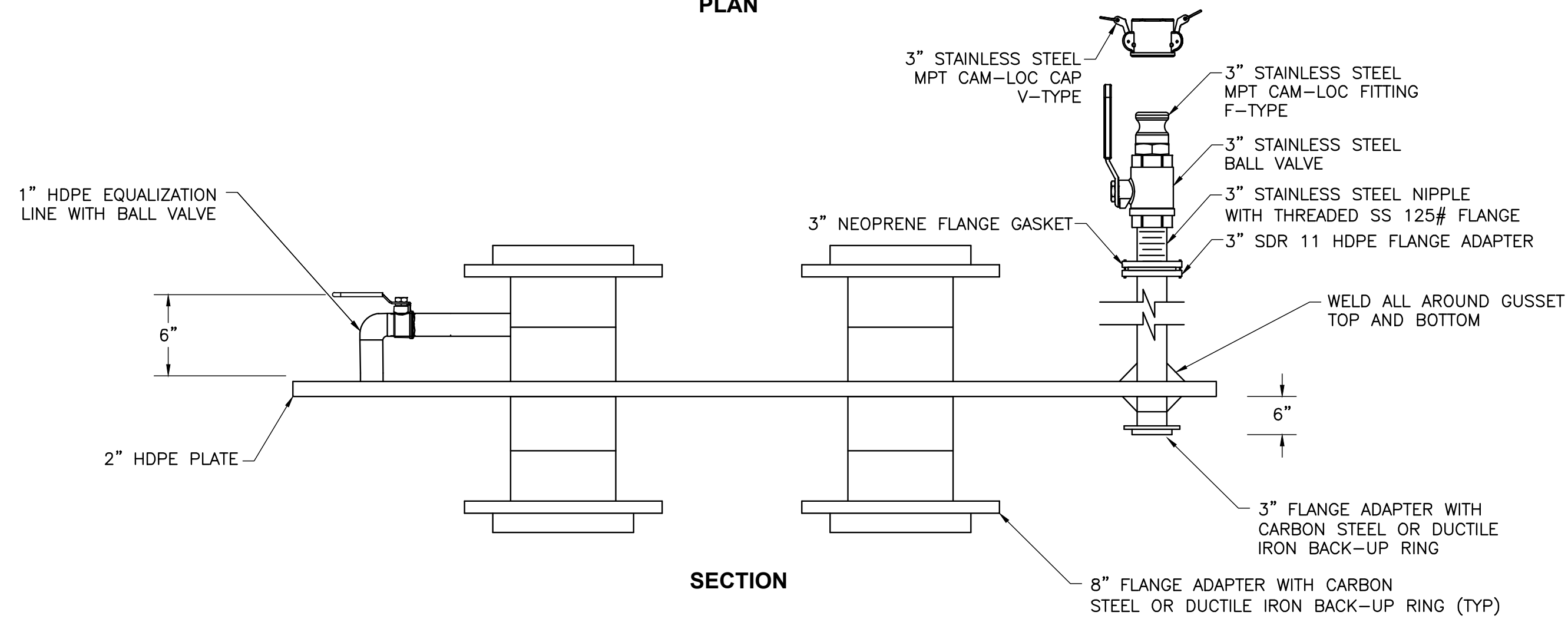
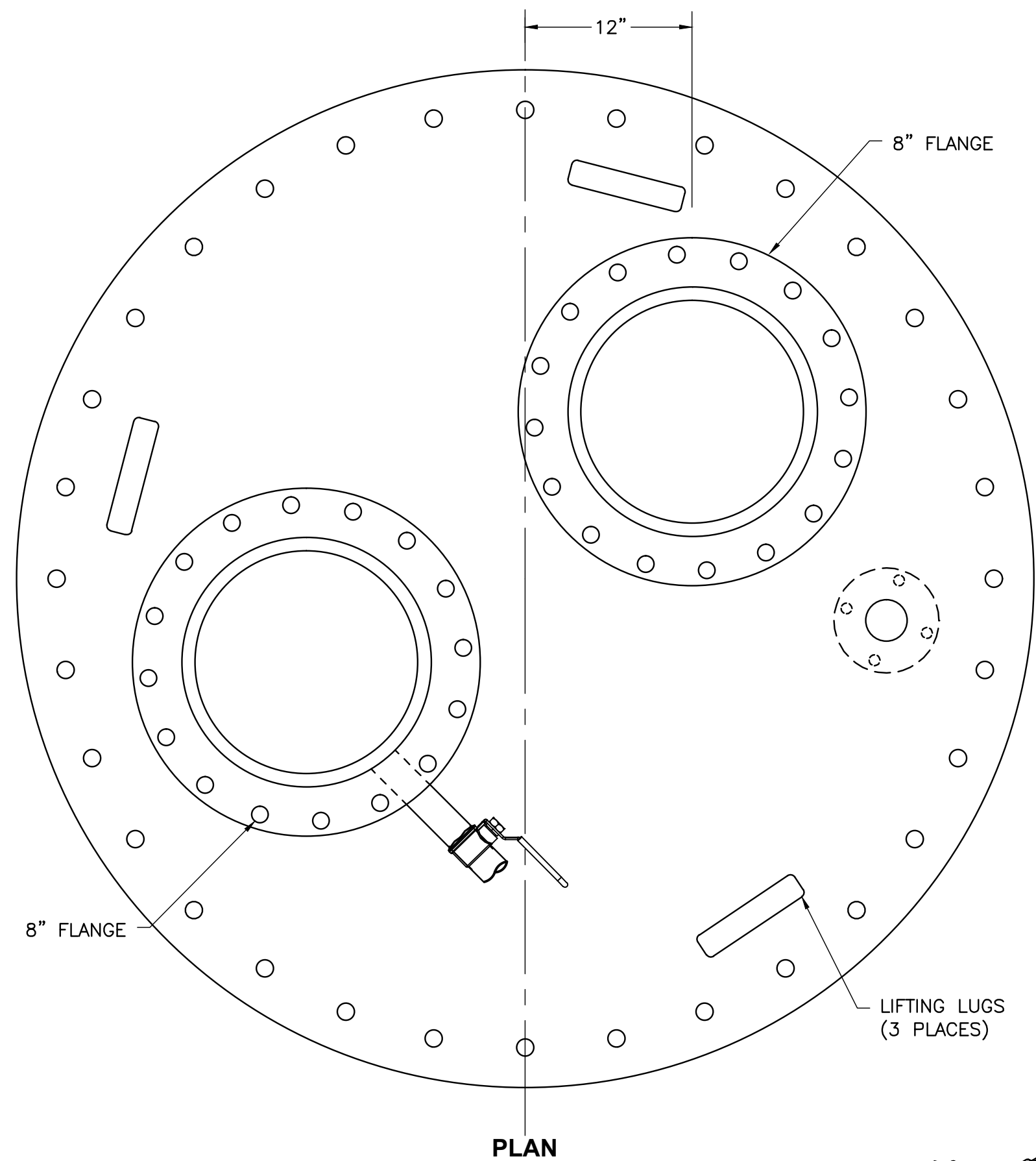
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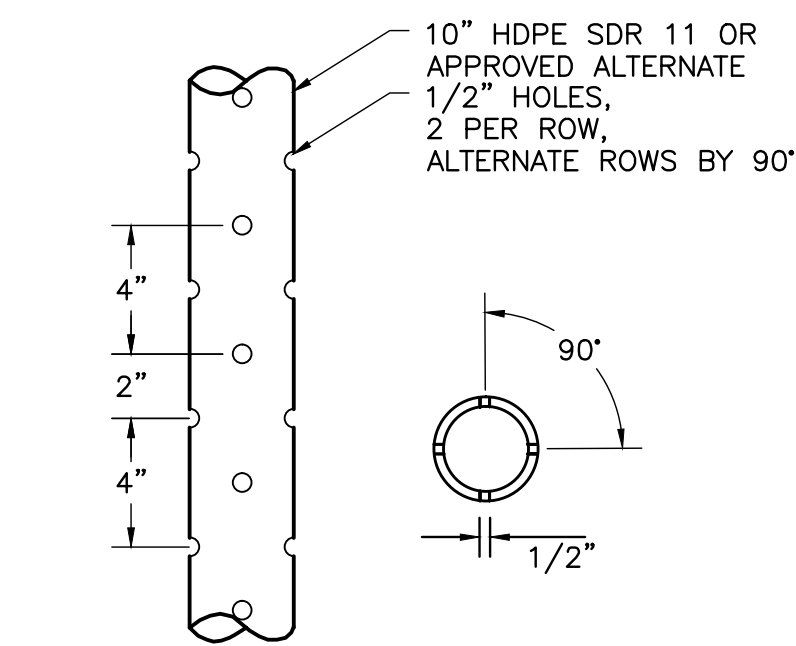
J.E.D. SOLID WASTE MANAGEMENT FACILITY ST. CLOUD, FLORIDA PHASES 1-5 RENEWAL PERMIT DRAWINGS GAS MANAGEMENT DETAILS I
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SHEET NO. 30 PROJECT NO. 160353



**TOP PLATE
DETAIL 1**
SCALE: NOT TO SCALE 32

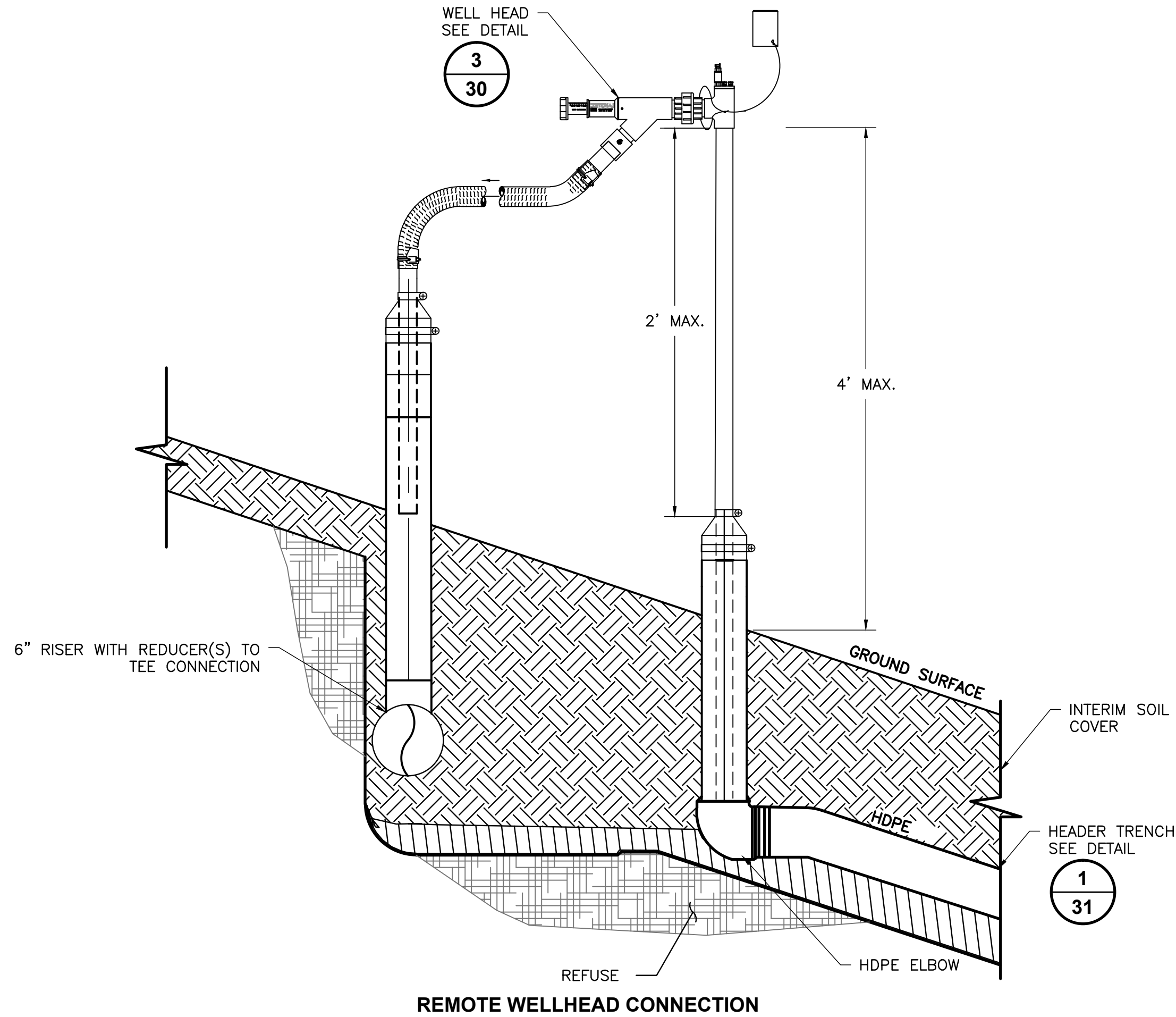
- NOTES:
1. CONFIGURATION IS TYPICAL FOR DETAILS 1 OF 33 AND 3 OF 33. DIAMETER VARIES ACCORDINGLY.
 2. TOP PLATE FOR DETAIL 3 OF 33 TO BE REINFORCED PER DETAIL 2 OF 33.



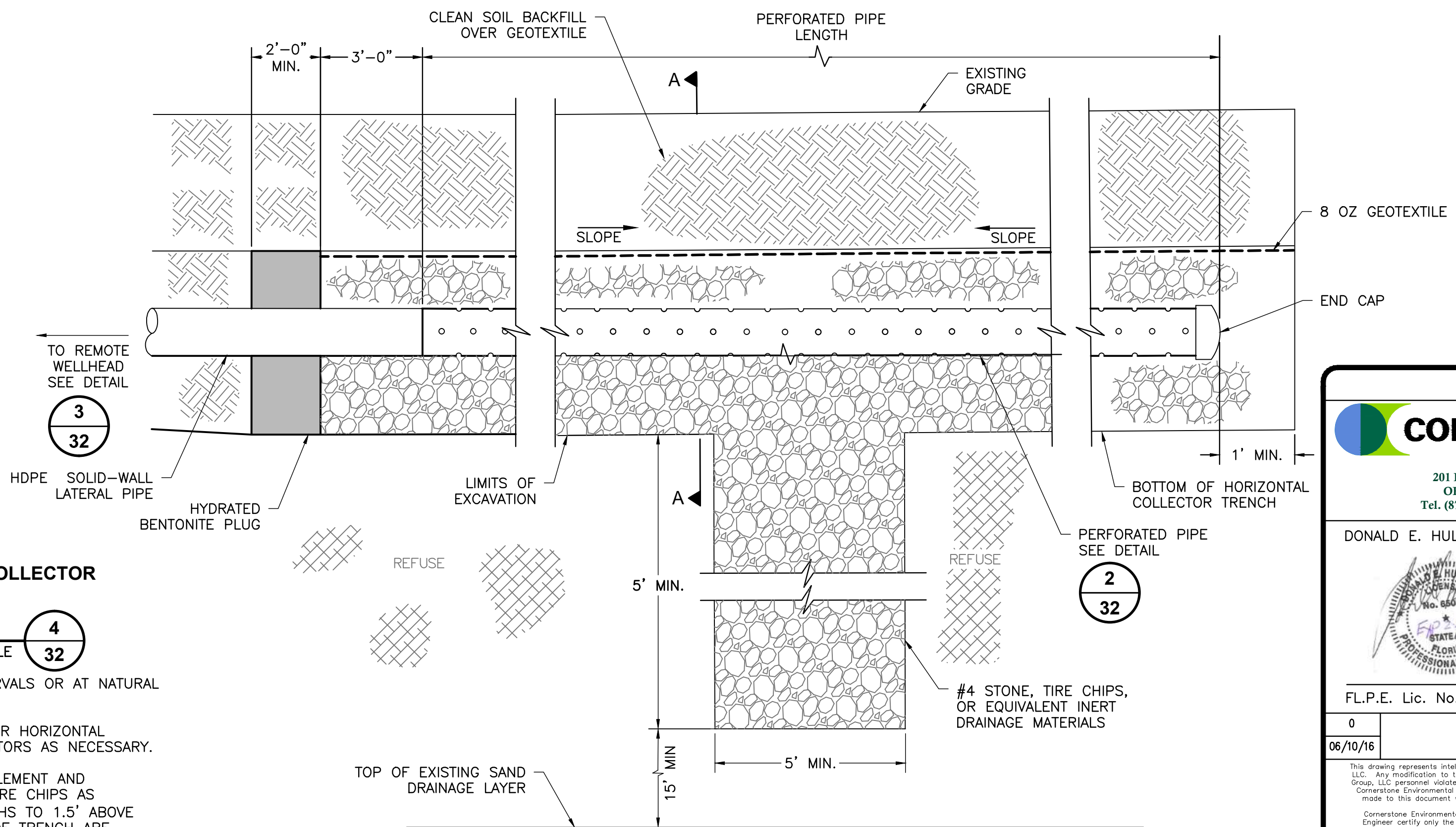
**HDPE PERFORATED PIPE
DETAIL 2**
SCALE: NOT TO SCALE 32

- NOTES:
1. PERFORATIONS SPACED 90° APART HORIZONTALLY.
 2. PERFORATIONS SPACED 4" APART VERTICALLY.
 3. 90° AND 270° ROWS STAGGERED 2" BELOW 0° AND 180° ROWS.
 4. ALTERNATE PERFORATED SIZES AND PATTERNS MAY BE UTILIZED.

- NOTE:
1. DETAILS ARE TYPICAL AND MAY VARY TO ACCOMMODATE FIELD CONDITIONS AND LOCATIONS AT THE TIME OF INSTALLATION.



**REMOTE WELLHEAD CONNECTION
DETAIL 3**
SCALE: NOT TO SCALE 32



**INTERIM HORIZONTAL COLLECTOR
DETAIL 4**
SCALE: NOT TO SCALE 32

- NOTES:
1. LOCATE SUMPS AT 150 FT INTERVALS OR AT NATURAL LOW POINT.
 2. MAINTAIN 5% MINIMUM GRADE FOR HORIZONTAL COLLECTORS. SAWTOOTH COLLECTORS AS NECESSARY.
 3. TO ALLOW FOR INCREASED SETTLEMENT AND COMPRESSIBILITY WHEN USING TIRE CHIPS AS BACKFILL MEDIA, INCREASE DEPTHS TO 1.5' ABOVE AND BELOW PIPE. DIMENSIONS OF TRENCH ARE MINIMUM. OWNER MAY INCREASE SIZE OF TRENCH BASED ON MATERIAL USED.
 4. TYPICAL 100' HORIZONTAL SEPARATION BETWEEN PERFORATIONS AND EDGE OF COVER.

PERMITTING

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DONALD E. HULLINGS, P.E.

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06/10/16

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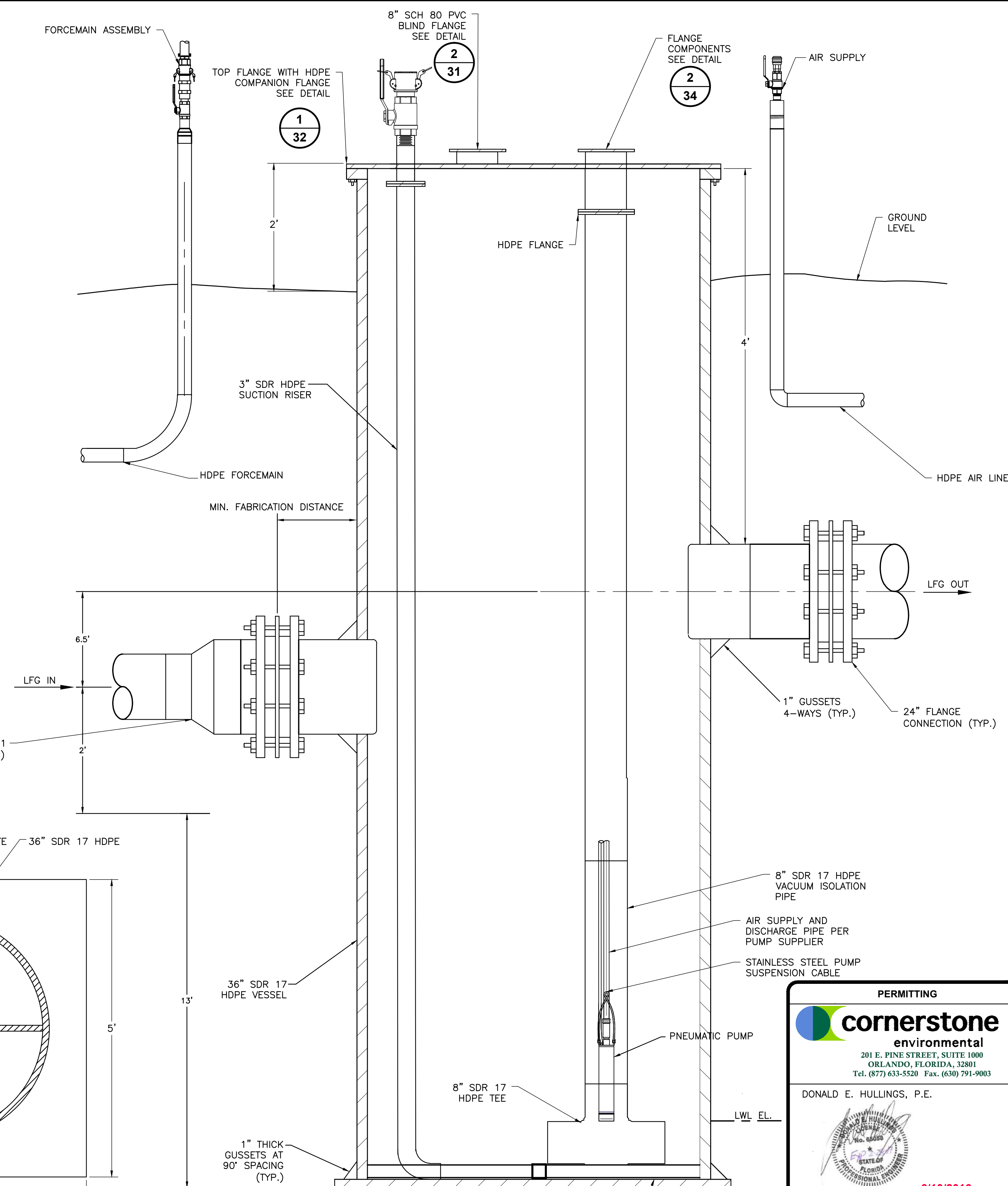
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ST. CLOUD, FLORIDA

**PHASES 1-5 RENEWAL PERMIT DRAWINGS
GAS MANAGEMENT DETAILS III**

SHEET NO.
32
PROJECT NO.
160353

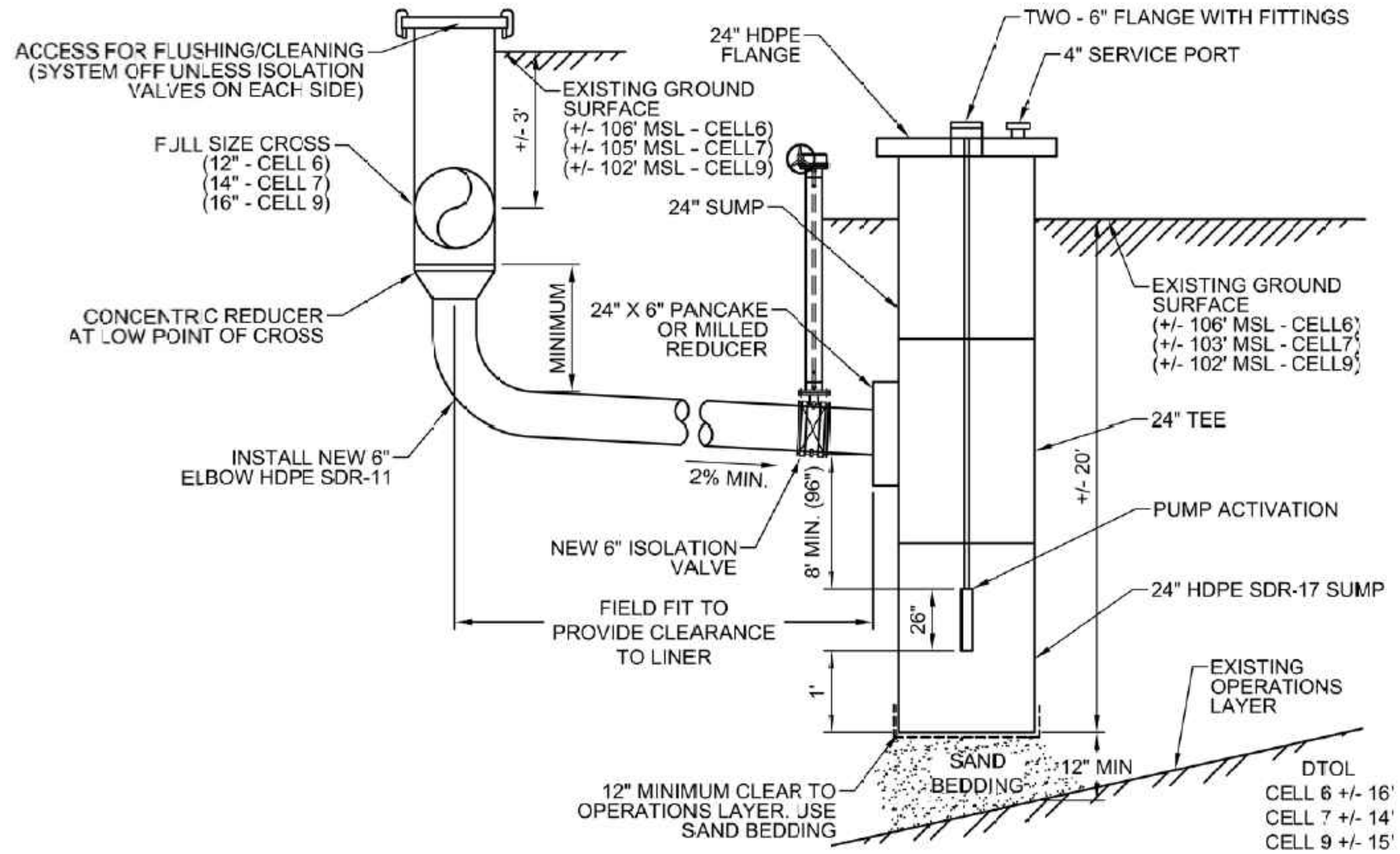


DETAIL 3
SCALE: NOT TO SCALE 33

$$\frac{2}{33}$$

FOR PERMITTING PURPOSES

PROJECT NO.
160353



SUPPLEMENTAL
CONDENSATE SUMP

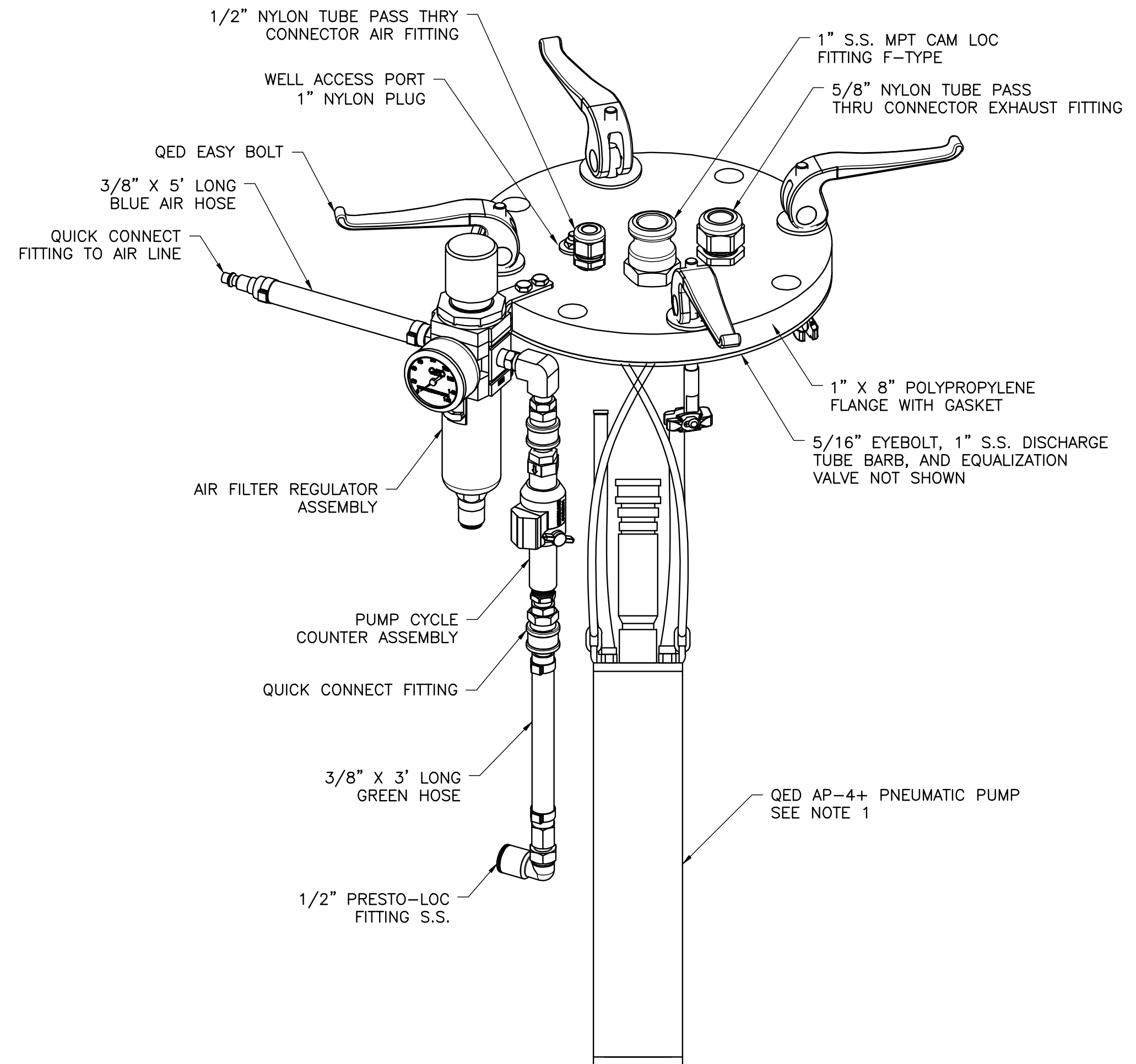
DETAIL

SCALE: NOT TO SCALE

1
34

NOTES:

1. DETAIL PROVIDED BY CB&I ENVIRONMENT AND INFRASTRUCTURE.
2. MAY BE USED IN LIEU OF CONDENSATE TRAP/DRIPLUG



PUMP FLANGE ASSEMBLY

DETAIL

SCALE: NOT TO SCALE

2
34

NOTES:

1. PUMP AND FLANGE ASSEMBLY SHOWN FOR REFERENCE PURPOSES ONLY. PUMP AND FLANGE ASSEMBLY TYPE TO BE DETERMINED BY OWNER AND IS NOT INCLUDED WITH FLANGE PACKAGE.
2. PUMP TO BE SET 6-INCH OFF THE BOTTOM OF THE SUMP.
3. PUMP EXHAUST PORTS TO BE FITTED WITH THROTTLING NEEDLE VALVE.
4. PUMP AIR EXHAUST TO BE FITTED WITH EQUALIZATION VALVE.

NOTE:

1. DETAILS ARE TYPICAL AND MAY VARY TO ACCOMMODATE FIELD CONDITIONS AND LOCATIONS AT THE TIME OF INSTALLATION.

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J.E.D. SOLID WASTE MANAGEMENT FACILITY
ST. CLOUD, FLORIDA

PHASES 1-5 RENEWAL PERMIT DRAWINGS
GAS MANAGEMENT DETAILS V

SHEET NO.

34

PROJECT NO.
160353

PERMITTING

cornerstone environmental

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6/10/2016

FL.P.E. Lic. No. 65058 Date

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06/10/16

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