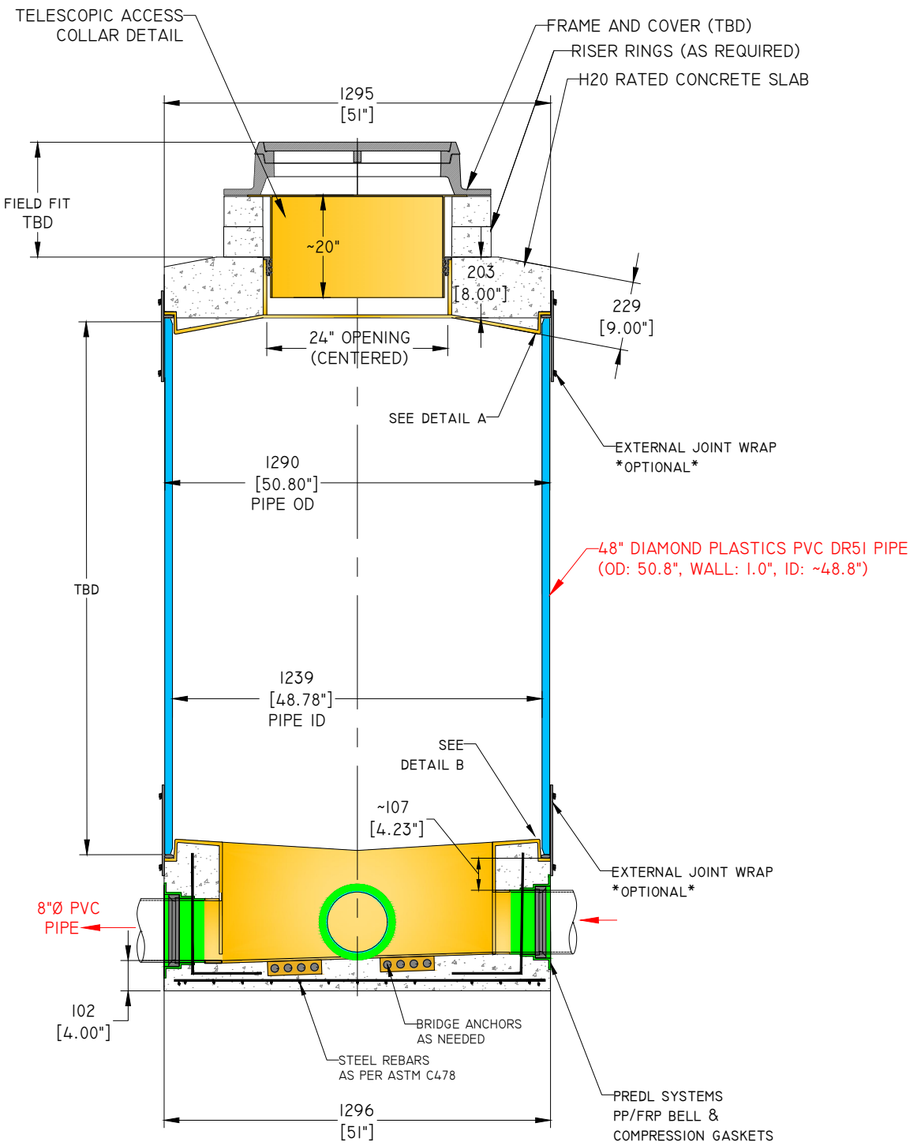
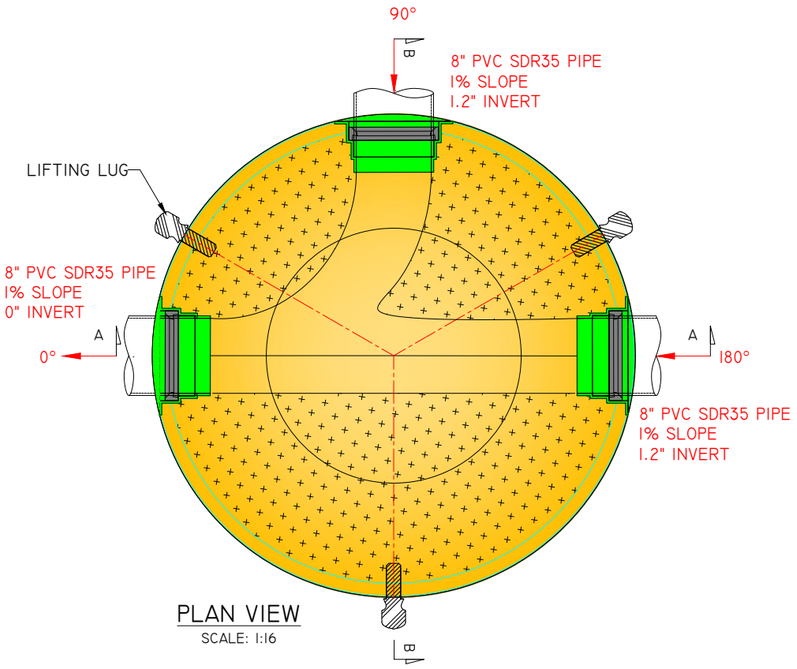
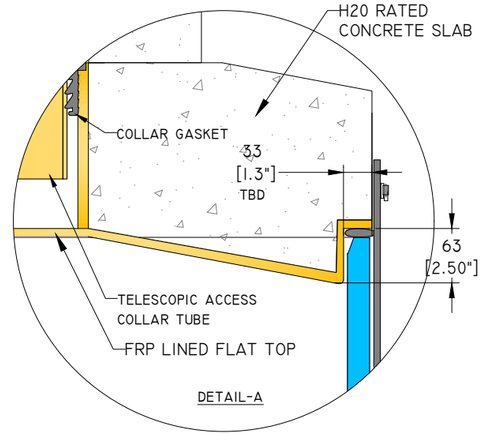
PRELIMINARY ONLY



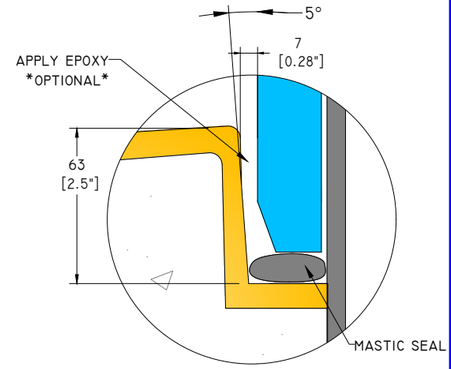
SECTION A-A
SCALE: 1:20



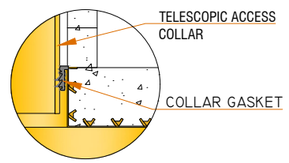
PLAN VIEW
SCALE: 1:16



DETAIL-A



DETAIL-B
BASE & LID GASKET SEAT



TELESCOPIC ACCESS
COLLAR DETAIL
N.T.S.

SPECIFICATIONS

1. THIS DRAWING REPRESENTS THE CONCRETE PROTECTIVE LINER DESIGN. ALL CONCRETE DIMENSIONS TO BE VERIFIED FROM THE CONTRACTOR OR PRECAST CONCRETE MANUFACTURER.
2. ALL "PIPE TO MANHOLE" CONNECTIONS SHALL HAVE GASKETS AS SHOWN IN THE DRAWINGS UNLESS OTHERWISE NOTED.
3. ALL PIPE GASKETS SHALL BE INSTALLED USING THE MANDREL RECOMMENDED BY THE GASKET MANUFACTURER.
4. ONLY PREDL CERTIFIED WELDERS AND FABRICATORS ARE AUTHORIZED TO FABRICATE, REPAIR, WELD, OR TEST THE LINERS.
5. ALL LINER SECTIONS SHALL BE WELDED OR JOINED TOGETHER AS PER THE MANUFACTURER INSTRUCTIONS UNLESS OTHERWISE NOTED.
6. LINER IS NOT TO BE COMPROMISED BY DRILLING OR PUNCTURING UNLESS SPECIFIED AND APPROVED BY PREDL LINER MANUFACTURER. PERFORATION OF LINER TO INSTALL LADDER RUNGS IS NOT RECOMMENDED.
7. PREDL CONCRETE LINER IS A NON-STRUCTURAL ELEMENT. ALL PRECAST CONCRETE SHALL BE DESIGNED, CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH LOCAL STANDARDS PRIOR TO FINAL INSTALLATION AND TESTING OF CPL.
8. ROUND MANHOLE STRUCTURES TYPICALLY DESIGNED TO ASTM C478. NON-ROUND MANHOLE STRUCTURES TYPICALLY DESIGNED TO ASTM C913.
9. PRECAST CONCRETE STRUCTURE WITH INTEGRAL PREDL CPL TO BE VACUUM TESTED IN ACCORDANCE WITH ASTM C1244 PRIOR TO FINAL INSTALLATION AND TESTING OF CPL.

CONCRETE BASE WEIGHT: ~2,200 LBS
CONCRETE LID WEIGHT: ~900 LBS

FIBERGLASS REINFORCED POLYMER (FRP)

TYPICAL PHYSICAL PROPERTIES

(FOR COMPONENTS)	TESTING METHOD	COMP.A	COMP.B
VISCOSITY, CPS	BROOKFIELD L.V.F. SPINDLE #2 @ 30 RPM	200	400 - 600
SPECIFIC GRAVITY	ASTM D-1638	1.20	1.15
WEIGHT PER GAL. LBS.		10.00	9.58
COLOUR	VISUAL	DARK BROWN	LIGHT BROWN
STYRENE MONOMER CONTENT	ASTM D-1638	20 % IN SYSTEM 1.20	1.15
MIX RATIO	BY WEIGHT	31	69

(FOR CURED MATERIAL)	TESTING METHOD	RESULTS (0% GLASS)
TENSILE STRENGTH, PSI	ASTM D-638	13,000
TENSILE MODULUS, PSI	ASTM D-638	450,000
FLEXURAL STRENGTH, PSI	ASTM D-790	28,000
FLEXURAL MODULUS, PSI	ASTM D-790	400,000
HEAT DISTORTION TEMP.	ASTM D-648	160° F
ELONGATION, %	ASTM D-638	4
BARCOL HARDNESS		42
SHORE D HARDNESS		85
LINEAR SHRINKAGE, %	ASTM D-2566-88	85

REACTIVITY DATA (100 GRAM MASS @ 74° F)	
DEMOLD TIME	10 - 15 MIN.
GEL TIME	120 - 180 SECONDS
PERFORMANCE CHARACTERISTICS	
FIBER WETTING	EXCELLENT
SAGGING / DRAINING	MINIMAL
FABRICATING METHOD	ALL ROOM TEMPERATURE METHODS

PREDL SYSTEMS
7520 CONRAD STREET
BURNABY, B.C. V5A 2H7
PHONE : 604 415-9944
FAX : 604 415-9954

DRAWN BY:	DATE DRAWN:
-	7/11/2017

NOTES: PRELIMINARY ONLY
CONCEPTUAL

REV NO	DATE/DESCRIPTION
3	14/11/2017
6	20/12/2017
7	4/11/2018
8	5/9/2018
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-

SPECIFIED FOR:
-

PROJECT DESCRIPTION:
PRELIMINARY ONLY
PVC MANHOLE

DRAWING DESCRIPTION:
MH#48

DWG NO:	REV NO:
2141977-MH48	8

SCALE:
AS NOTED

CLIENTS JOB NUMBER: