

Submittal Description: Shop Drawings

Submittal No:¹ 2

Spec Section: 05150

	Routing	Sent	Received
OWNER: City of Lake Oswego	Contractor/CM	<u>1-9-09</u>	
PROJECT: Lake Oswego Interceptor Sewer	CM/Engineer	<u>MCN 1-9-09</u>	<u>1/9/09</u>
CONTRACTOR:	Engineer/CM		
	CM/Contractor		

We are sending you: Attached Product data for information only Submittals for review and comment
 Under separate cover via _____

Remarks: _____

Item	Copies	Date	Section No.	Description	Review action ^a	Reviewer initials	Review comments attached
<u>1</u>	<u>3</u>	<u>1/9/09</u>	<u>05150</u>	<u>Shop Drawings</u>	<u>NET</u>	<u>NEB</u>	

^aNote: NET = No exceptions taken; MCN = Make corrections noted; A&R = Amend and resubmit; R = Rejected
 Attach additional sheets if necessary.

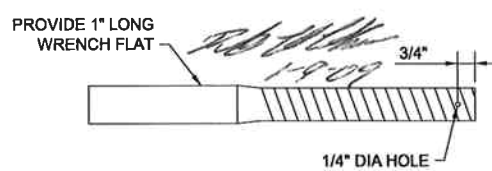
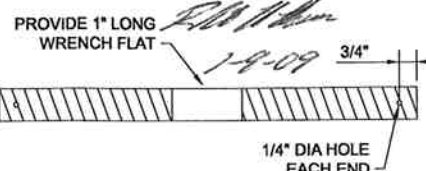
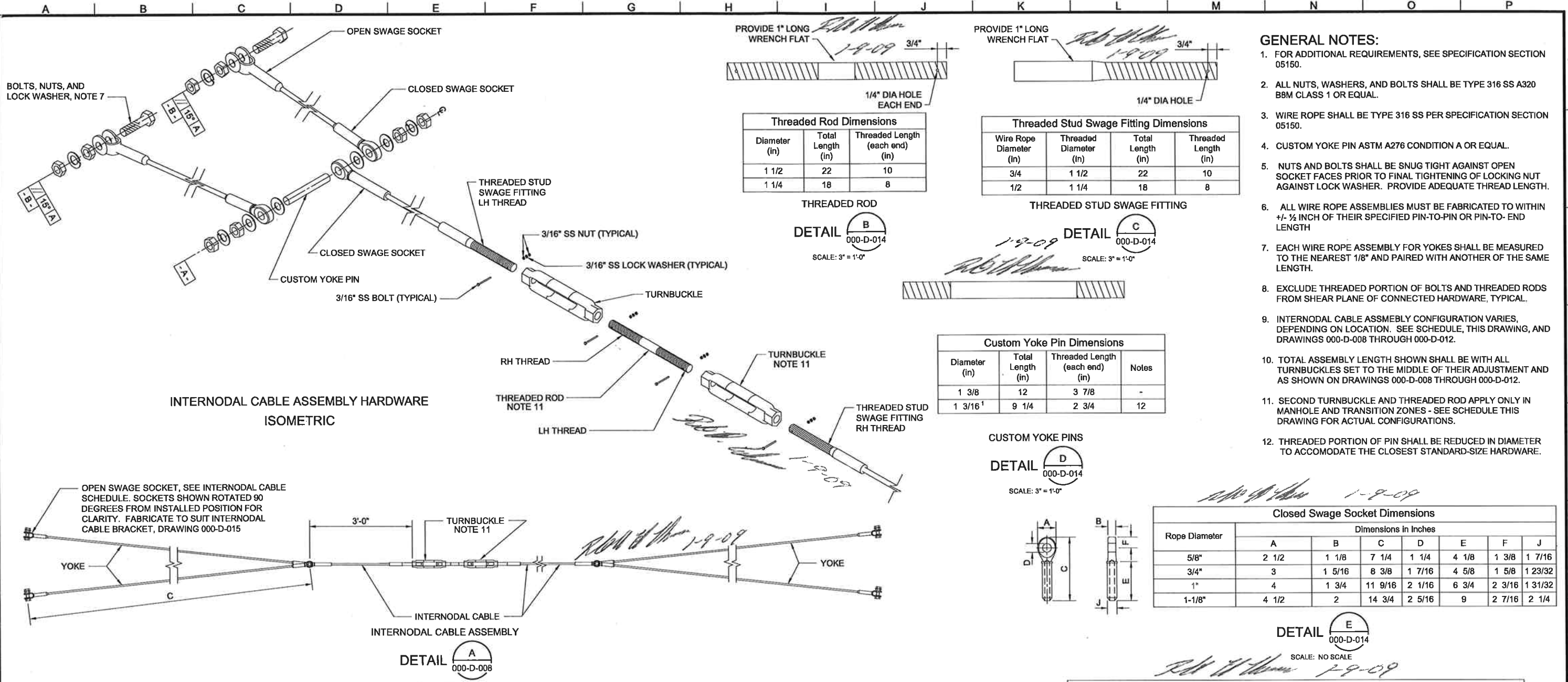
Contractor: Certify either A or B

- A. We have verified that the material or equipment contained in this submittal meets all the requirements, including coordination with all related work, specified (no exceptions).
- B. We have verified that the material or equipment contained in this submittal meets all the requirements specified except for the attached deviations.

No.	Deviation
<u>1</u>	<u>Holes in TB jaw ends have been moved inboard</u>

Certified by: [Signature]
 Contractor's Signature

¹ See paragraph 01300-4.0 A, Transmittal Procedure.



Threaded Rod Dimensions

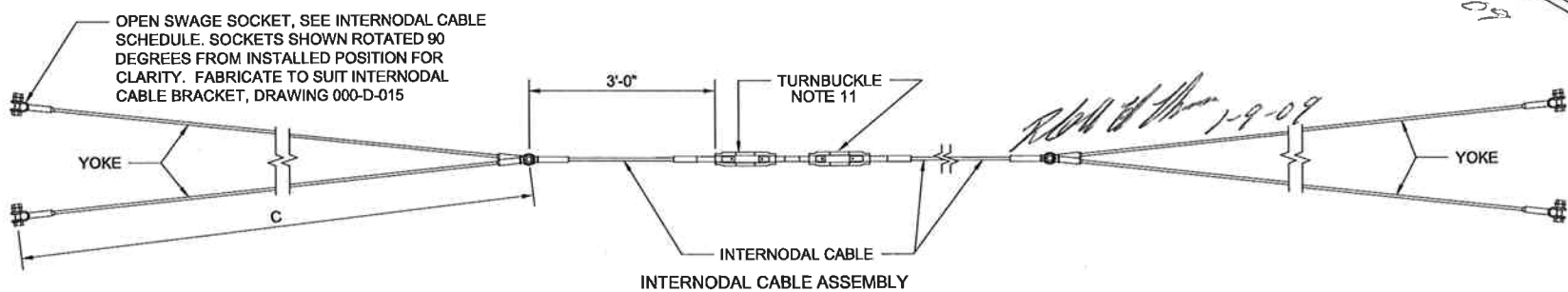
Diameter (in)	Total Length (in)	Threaded Length (each end) (in)
1 1/2	22	10
1 1/4	18	8

Threaded Stud Swage Fitting Dimensions

Wire Rope Diameter (in)	Threaded Diameter (in)	Total Length (in)	Threaded Length (in)
3/4	1 1/2	22	10
1/2	1 1/4	18	8

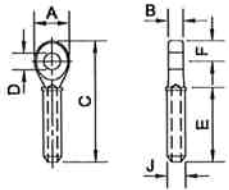
Custom Yoke Pin Dimensions

Diameter (in)	Total Length (in)	Threaded Length (each end) (in)	Notes
1 3/8	12	3 7/8	-
1 3/16 ¹	9 1/4	2 3/4	12



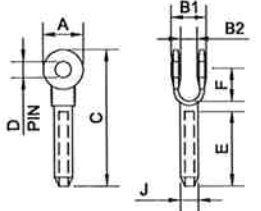
Closed Swage Socket Dimensions

Rope Diameter	Dimensions in Inches						
	A	B	C	D	E	F	J
5/8"	2 1/2	1 1/8	7 1/4	1 1/4	4 1/8	1 3/8	1 7/16
3/4"	3	1 5/16	8 3/8	1 7/16	4 5/8	1 5/8	1 23/32
1"	4	1 3/4	11 9/16	2 1/16	6 3/4	2 3/16	1 31/32
1-1/8"	4 1/2	2	14 3/4	2 5/16	9	2 7/16	2 1/4



Open Swage Socket Dimensions

Rope Diameter	Dimensions in Inches						
	A	B1	C	D	E	F	Notes
5/8"	2 1/2	2 3/8	2 3/8	8 7/8	1 1/4	4 1/8	2 1/4
3/4"	3	2 3/4	1 7/16	10 3/8	1.4375 ¹	4 5/8	2 3/4
1"	4	3 3/4	2	14 1/4	2.0625 ¹	6 3/4	3 3/4
1-1/8"	4 1/2	4 1/4	2 1/4	17 7/8	2.3125 ¹	9	4 1/4



Internodal Cable Assembly Schedule

Cable Diameter (in)	Application	Quantity of Assemblies	Total Assembly Length (Note 10) (ft)	Yoke Length C (Note 6) (ft)	Turnbuckle Nominal Size (in)	Turnbuckles Per Assembly	Closed Swage Sockets Per Assembly	Open Swage Sockets Per Assembly	Threaded Stud Swage Fittings Per Assembly	Threaded Rods Per Assembly	Custom Yoke Pins Per Assembly
3/4	Interceptor (Typical)	23	198.1	20	1 1/2 X 12	1	6	4	2	0	2
3/4	Interceptor (MH / Transition)	14	198.1	20	1 1/2 X 12	2	6	4	2	1	2
5/8	Springbrook Trunk (Typical)	0	208.1	20	1 1/4 X 12	1	6	4	2	0	2
5/8	Springbrook Trunk (MH / Transition)	2	208.1	20	1 1/4 X 12	2	6	4	2	1	2
5/8	Twin Points Trunk (Typical)	2	150.6	20	1 1/4 X 12	1	6	4	2	0	2
5/8	Twin Points Trunk (MH / Transition)	2	150.6	20	1 1/4 X 12	2	6	4	2	1	2
5/8	Forest Hills Trunk (Typical)	0	228.1	20	1 1/4 X 12	1	6	4	2	0	2
5/8	Forest Hills Trunk (MH / Transition)	2	228.1	20	1 1/4 X 12	2	6	4	2	1	2
5/8	Lost Dog Trunk (Typical)	1	223.1	20	1 1/4 X 12	1	6	4	2	0	2
5/8	Lost Dog Trunk (MH / Transition)	2	223.1	20	1 1/4 X 12	2	6	4	2	1	2

- GENERAL NOTES:**
- FOR ADDITIONAL REQUIREMENTS, SEE SPECIFICATION SECTION 05150.
 - ALL NUTS, WASHERS, AND BOLTS SHALL BE TYPE 316 SS A320 BBM CLASS 1 OR EQUAL.
 - WIRE ROPE SHALL BE TYPE 316 SS PER SPECIFICATION SECTION 05150.
 - CUSTOM YOKE PIN ASTM A276 CONDITION A OR EQUAL.
 - NUTS AND BOLTS SHALL BE SNUG TIGHT AGAINST OPEN SOCKET FACES PRIOR TO FINAL TIGHTENING OF LOCKING NUT AGAINST LOCK WASHER. PROVIDE ADEQUATE THREAD LENGTH.
 - ALL WIRE ROPE ASSEMBLIES MUST BE FABRICATED TO WITHIN +/- 1/2 INCH OF THEIR SPECIFIED PIN-TO-PIN OR PIN-TO-END LENGTH.
 - EACH WIRE ROPE ASSEMBLY FOR YOKES SHALL BE MEASURED TO THE NEAREST 1/8" AND PAIRED WITH ANOTHER OF THE SAME LENGTH.
 - EXCLUDE THREADED PORTION OF BOLTS AND THREADED RODS FROM SHEAR PLANE OF CONNECTED HARDWARE, TYPICAL.
 - INTERNODAL CABLE ASSEMBLY CONFIGURATION VARIES, DEPENDING ON LOCATION. SEE SCHEDULE, THIS DRAWING, AND DRAWINGS 000-D-008 THROUGH 000-D-012.
 - TOTAL ASSEMBLY LENGTH SHOWN SHALL BE WITH ALL TURNBUCKLES SET TO THE MIDDLE OF THEIR ADJUSTMENT AND AS SHOWN ON DRAWINGS 000-D-008 THROUGH 000-D-012.
 - SECOND TURNBUCKLE AND THREADED ROD APPLY ONLY IN MANHOLE AND TRANSITION ZONES - SEE SCHEDULE THIS DRAWING FOR ACTUAL CONFIGURATIONS.
 - THREADED PORTION OF PIN SHALL BE REDUCED IN DIAMETER TO ACCOMMODATE THE CLOSEST STANDARD-SIZE HARDWARE.

BROWN AND CALDWELL
PORTLAND, OREGON

DESIGNED: NEB
DRAWN: REK
CHECKED: LBD
APPROVED: JH

DATE: _____

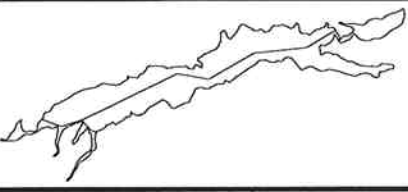
EXTERNAL REFERENCE FILES

134061-TITLE BLOCK.dwg

90% SUBMITTAL - LAKE FULL PRELIMINARY

THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS IT BEARS THE SEAL AND SIGNATURE OF A DULY REGISTERED PROFESSIONAL

CITY OF LAKE OSWEGO
CITY OF LAKE OSWEGO
LOIS GROUP
JOEL B. KOMAREK, P.E.
PROJECT DIRECTOR



LAKE OSWEGO INTERCEPTOR SEWER UPGRADE
STRUCTURAL
INTERNODAL CABLE ASSEMBLY

FILENAME: 134061-SF-000-D-014
BC PROJECT NUMBER: 134061
SCALE: NONE
DRAWING NUMBER: 000-D-014
SHEET NUMBER OF XX

Photo Image Filename: Path: P:\134061-City of Lake Oswego, Lake Interceptor.dwg Plot date: Dec 19, 2008-04:31:49pm CAD User: rkingery

