COSMIX™

COLORADO SPRINGS METRO

INTERSTATE EXPANSION

APPROVED FOR CONSTRUCTION

COLORADO SPRINGS UTILITIES
NON-POTABLE WATER DESIGN APPROVAL 1/5

DATE: 1/24/07 BY: Harold S Franson

PROJECT NO. 2007-N001 RMS NO. 1511521

IN CASE OF ERRORS OR OMISSIONS WITH THE NON-POTABLE WATER DESIGN AS SHOWN ON THIS DOCUMENT THE STANDARDS AS DEFINED IN THE "WATER LINE EXTENSION AND SERVICE STANDARDS" SHALL RULE. APPROVAL EXPIRES 180 DAYS FROM DESIGN APPROVAL.

APPROVAL FOR DRAWINGS LISTED ON W3007A-G-3 (6 SHEETS)

SEGMENT 1: UTILITY RELOCATION
CSU-WAT-3007A

COSMIX WORK ORDER NO. 045-0
UTILITY DESIGN SHEETS

INSPECTOR: A. BAKER
CONTRACTOR: SEMA
START - 2/22/07
FINISH - 3/3/07

MATERIALS

291' (16" HDPE PIPE)
65' (24" HDPE CASING PIPE)
2 (MJ ADAPTERS)
(1) 16" PRATT BFV OPEN LEFT
(1) EXISTING 16" BFV OPEN RIGHT, #ED V/V ON THESE PLANS
(2) END COVERS
(2) CRAS

ROCKRIMMON CONSTRUCTORS RELEASED FOR CONSTRUCTION

FOR INFORMATION REGARDING THIS PROJECT CONTACT:
ALLEN MOLES, P.E. - PROJECT MANAGER
COLORADO SPRINGS, COLORADO
719-477-4937

CALL UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

Date Plotted: 01/24/2007
Time Plotted: 1:44:34 PM
Plotted By: $username
CAD Ver.: MicroStation V8 2004
WO No. 045-0 327504.DS1 Utility
Scale: Not to Scale Units: US Survey Foot

Designed By: S KINSMAN	ISSUE RECORD		
	NO.	DESCRIPTION	DATE
Detailed By: L STUDER	A	65% DESIGN REVIEW	01/03/07
	1	APPROVED FOR CONSTRUCTION	01/16/07
Checked By: S KINSMAN			

ROCKRIMMON CONSTRUCTORS
A SEMA/CKM HILL JOINT VENTURE

COSMIX. COLORADO SPRINGS METRO INTERSTATE EXPANSION

DESIGN SEGMENT 1
TITLE SHEET
WATER RELOCATION: CSU-WAT-3007A
WORK ORDER NO. 045-0
PROJECT NO. 2007-N001 RMS NO. 1511521

Project No./Code IM 0252-370 S.A. 14740
File Name DS1-UTGE-W3007A-01.DGN
Drawing Number W3007A-G-1

COLORADO REGISTERED PROFESSIONAL ENGINEER
STEPHANIE JO KINSMAN
39346
1/23/07

COLORADO SPRINGS UTILITIES SPECIFIC NOTES

1. ALL PERMITS REQUIRED SHALL BE OBTAINED BY THE PIPELINE INSTALLER WHO SHALL COMPLY WITH THE CONDITIONS THEREOF.
2. ALL WATER MAIN INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE LATEST "COLORADO SPRINGS UTILITIES STANDARDS AND SPECIFICATIONS". THE CONTRACTOR SHALL HAVE A COPY OF THE ABOVE NAMED SPECIFICATIONS AT THE WORK SITE AT ALL TIMES.
3. ALL WORK IN THE CITY OF COLORADO SPRINGS PUBLIC RIGHT-OF-WAY SHALL BE IN CONFORMANCE WITH THE CITY OF COLORADO SPRINGS, ENGINEERING DIVISION STANDARD SPECIFICATIONS.
4. CHANGES IN DESIGN DETERMINED NECESSARY TO CONFORM TO FIELD CONDITIONS MAY REQUIRE ADDITIONAL MATERIALS NOT INDICATED ON THIS PLAN. ALL CHANGES SHALL BE APPROVED BY CSU.
5. REUSE OF EXISTING FITTINGS SHALL BE LEFT TO THE DISCRETION OF THE CSU INSPECTOR. ANY MATERIAL SALVAGED AND NOT REUSED SHALL BE RETURNED TO THE WATER WAREHOUSE.
6. THE FOLLOWING TIE-IN POINTS WERE NOT FIELD VERIFIED FOR LOCATION AND SHALL BE EXPOSED PRIOR TO CONSTRUCTION. NOTIFY CSU FOR SCHEDULING OF SURVEY CREW TO CONFIRM EXACT ALIGNMENT. IF NECESSARY, POINTS ARE AS FOLLOWS:
7. ALL PIPELINE ELEVATIONS SHOWN ARE TO THE BOTTOM OF PIPE, UNLESS OTHERWISE NOTED.

NOTE: GENERAL NOTES WITH MARKED BOXES ARE ALSO APPLICABLE TO THIS JOB.

☒ 8. A. ☒ NO SPECIAL CORROSION CONTROL REQUIRED.
B. ☐ SPECIAL CORROSION CONTROL REQUIRED BETWEEN STATIONS_____ AND_____
C. ☐ POLYETHYLENE WRAP REQUIRED ON ALL FITTINGS, HYDRANTS AND METALLIC FITTINGS, ETC.
D. ☐ ONE 9lb ANODE BONDED TO EACH INDIVIDUAL FITTING OR APPURTENANT.
E. ☐ DOUBLE BONDING REQUIRED.
F. ☐ ANODE STATIONS:

TEST STATIONS:

INSULATING COUPLING STATIONS:

☒ 9. THE EXISTING UTILITIES WERE NOT POTHOLED FOR LOCATION AND SHALL BE LOCATED PRIOR TO CONSTRUCTION. NOTIFY CSU FOR SCHEDULING OF SURVEY CREW TO CONFIRM EXACT ALIGNMENT, IF NECESSARY.

☒ 10. PROPOSED WATER MAINS SHALL BE INSTALLED WITH A MINIMUM COVER OF 5 1/2 FEET OR TO THE DEPTHS SHOWN ON THE PLANS.

☒ 11. UNDERGROUND TELEPHONE AND CABLEVISON EXISTS IN CONSTRUCTION AREA. CALL FOR LOCATION PRIOR TO EXCAVATIONS.

☐ 12. PROPOSED WATER MAIN WILL NEED TO BE TIED BACK INTO EXISTING MAIN AT NIGHT.

☐ 13. SPECIAL TIE-BACK CONSTRUCTION AND/OR MATERIAL IS REQUIRED AND SHALL BE SPACED SYMMETRICALLY AROUND FITTINGS AT STATIONS:
NOTE: (FOR SLOTTED VALVES, T-BOLTS AND ROD COUPLINGS ARE ACCEPTABLE FOR THRUST RESTRAINT.)

☐ 14. (DEVELOPER/CONTRACTOR)
CSU CANNOT GUARANTEE THE LOCATIONS OR ACCURACY OF UNDERGROUND FACILITIES OR BE RESPONSIBLE FOR ANY DAMAGE THAT MAY OCCUR DURING CONSTRUCTION. THE (DEVELOPER/CONTRACTOR) SHALL BE RESPONSIBLE FOR VERIFYING THAT THESE PLANS CONFORM TO PROPOSED AND EXISTING FIELD CONDITIONS, AND FOR DETERMINING THE LOCATIONS, HORIZONTAL AND VERTICAL, OF ALL UTILITIES PRIOR TO EXCAVATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES AND FACILITIES IN A MANNER DETERMINED NECESSARY BY THE OWNER OF SUCH UTILITIES OR FACILITIES. ANY SUCH PROTECTION OR ADJUSTMENTS IN THE GRADE OR ALIGNMENT OF THE PIPELINE AS DETERMINED NECESSARY BY CSU SHALL BE AT THE EXPENSE OF THE DEVELOPER/CONTRACTOR..

☒ 15. THERE SHALL BE NO CLAIMS AGAINST CSU FOR HINDRANCES OR DELAYS DUE TO ANY CAUSE, INCLUDING RESOLUTION OF CONFLICTS.

☒ 16. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO RE-EXCAVATE THE TRENCH WHERE DISINFECTION AND PRESSURE TESTING WILL BE PERFORMED AND PREPARE AND PROTECT THESE PITS FOR DISINFECTION BY THE OWNER. SINCE DISINFECTION WILL TAKE PLACE FIRST, THE CONTRACTOR SHALL ASSIST IN TRENCH MAINTENANCE AND STAND BY DURING DISINFECTION. THERE SHALL BE NO CLAIMS FOR ANY DELAYS OR EXTRA COST SHOULD UNFORSEEN ISSUES ARISE. THERE CAN BE NO GUARANTEE OF WHEN OR HOW LONG DISINFECTION WILL OCCUR. AFTER SUCCESSFUL PRESSURE TESTING THE SITE/S WILL BE RESTORED AS SPECIFIED.

☐ 17. CONTRACTOR SHALL NOTIFY THE COLORADO DEPARTMENT OF TRANSPORTATION, UTILITY ENGINEER, ONE WEEK PRIOR TO BEGINNING WORK ON STATE HIGHWAY RIGHT-OF-WAY. CONTACT PERSON: MR. DENNIS FITZSIMMONS, (719) 546-5433.

☒ 18. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY PROTECTION, REMOVAL AND REINSTALLATION AT THE SAME LOCATION OF ALL FACILITIES AFFECTED BY HIS WORK.

☒ 19. AFTER INSTALLATION OF PIPELINE AND BACKFILLING OF TRENCH TO FINAL GRADE, ANY EXCESS MATERIAL SHALL BE SPREAD AND COMPACTED OR HAULED AWAY AND DISPOSED OF AT THE OWNER'S DISCRETION.

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2/5
COLORADO SPRINGS UTILITIES
NON-POTABLE WATER DESIGN APPROVAL
DATE: 1/29/07 BY: Harold Transon

COLORADO REGISTERED PROFESSIONAL ENGINEER
STEPHANIE JO KINSMAN
39346
1/23/07

Designed By:	ISSUE RECORD		
S KINSMAN	NO.	DESCRIPTION	DATE
Detailed By:	A	65% DESIGN REVIEW	01/03/07
L STUDER	1	APPROVED FOR CONSTRUCTION	01/16/07
Checked By:			
S KINSMAN			

ROCKRIMMON CONSTRUCTORS
A SENECA/GRAY HILL JOINT VENTURE

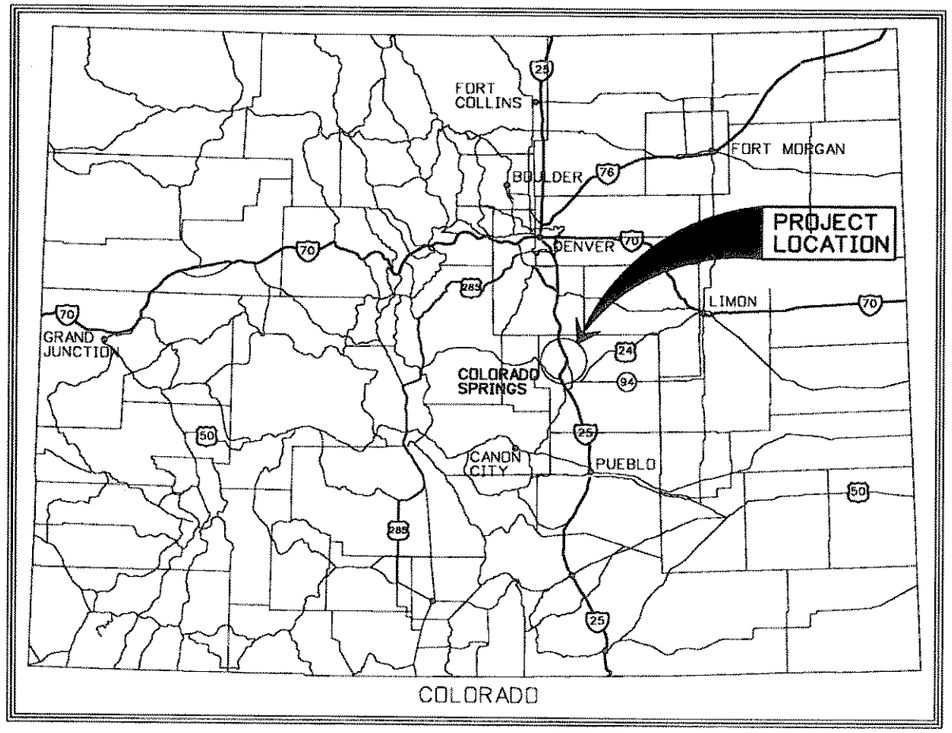
COSMIX. COLORADO SPRINGS METRO INTERSTATE EXPANSION

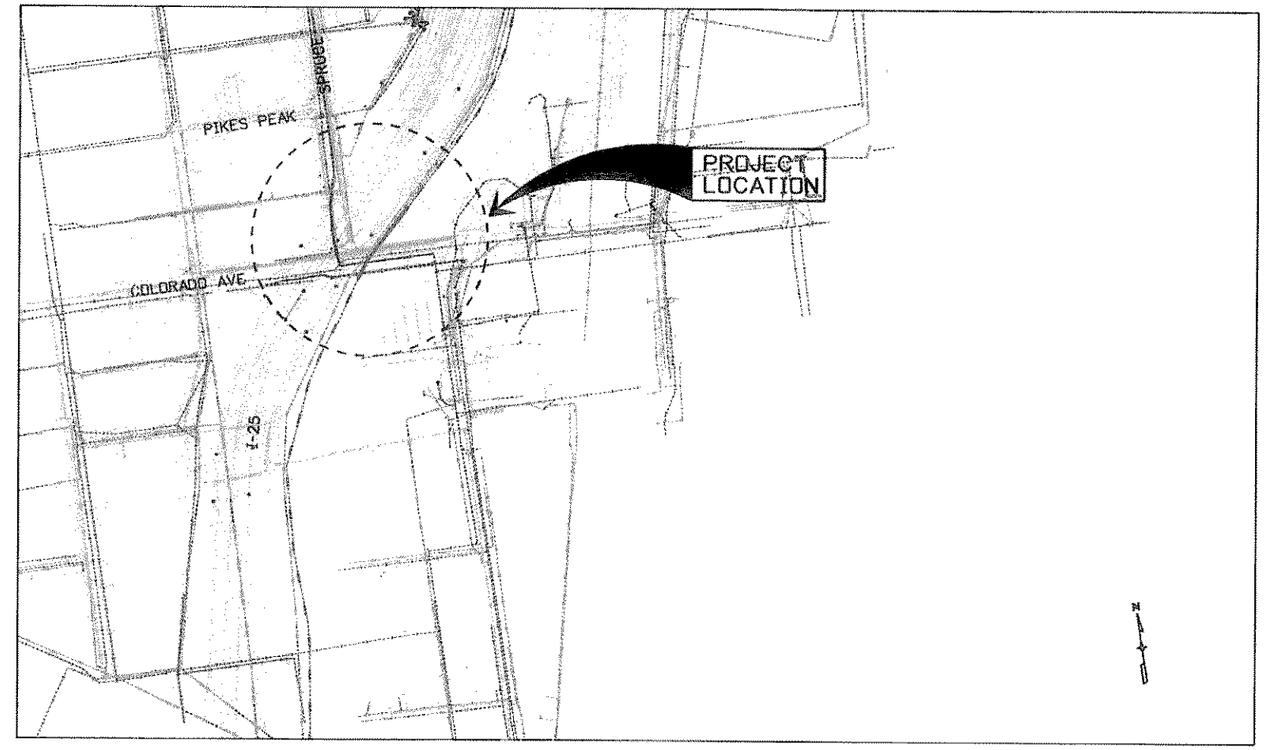
DESIGN SEGMENT 1
CSU NOTES
WATER RELOCATION: CSU-WAT-3007A
WORK ORDER NO. 045-0
PROJECT NO. 2007-N001 RMS NO. 1511521

Project No./Code
IM 0252-370
S.A. 14740

File Name: DSI-UTGE-W3007A-02.DGN
Drawing Number: W3007A-G-2

Date Plotted: 01/24/2007
Time Plotted: 1:45:47 PM
Plotted By: $username
CAD Ver.: MicroStation V8 2004
WO No. 045-0 327504.DSI Utility
Scale: Not to Scale Units: US Survey Foot





LOCATION MAP

COLORADO SPRINGS UTILITIES CORRESPONDING MAP SHEETS: G-34
PRESSURE RANGE: 180 PSI

INDEX TO DRAWINGS

W3007A-G-1	TITLE SHEET
W3007A-G-2	COLORADO SPRINGS UTILITIES SPECIFIC NOTES
W3007A-G-3	LOCATION MAP, VICINITY MAP AND INDEX TO DRAWINGS
W3007A-G-4	KEY PLAN
W3007A-PP-1	PLAN AND PROFILE SHEET 1
W3007A-D-1	DETAIL SHEET 1

CALL UTILITY NOTIFICATION CENTER OF COLORADO
1-800-922-1987
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

COLORADO SPRINGS UTILITIES 3/5
NON-POTABLE WATER DESIGN APPROVAL
DATE: 1/29/07 BY: Harold L Franson

Designed By:	ISSUE RECORD		
S KINSMAN	NO.	DESCRIPTION	DATE
Detailed By:	A	65% DESIGN REVIEW	01/03/07
L STUDER	1	APPROVED FOR CONSTRUCTION	01/16/07
Checked By:			
S KINSMAN			

ROCKRIMMON CONSTRUCTORS
A BEMACHEM HILL JOINT VENTURE

COSMIX
COLORADO SPRINGS METRO INTERSTATE EXPANSION

DESIGN SEGMENT 1
LOCATION MAP, VICINITY MAP AND INDEX TO DRAWINGS
WATER RELOCATION: CSU-WAT-3007A
WORK ORDER NO. 045-0
PROJECT NO. 2007-N001 RMS NO. 1511521

Project No./Code
IM 0252-370
S.A. 14740

File Name DSI-UTGE-W3007A-03.DGN
Drawing Number W3007A-G-3

COLORADO REGISTERED PROFESSIONAL ENGINEER
STEPHANIE JO KINSMAN
39346
1/23/07

Date Plotted: 01/24/2007
Time Plotted: 1:47:11 PM
Plotted By: $username
CAD Ver.: MicroStation V8 2004
WO No. 045-0 327504.DSI Utility
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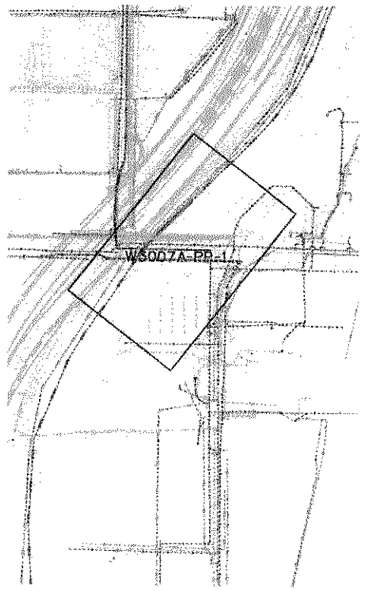

LEGEND

NEW FEATURES

- AIR VACUM/RELEASE VAVLE
- BLOWOFF ASSEMBLE (PLAN)
- NEW GATE VALVE
- PH-1 POTHOLE LOCATION AND NUMBER
- A ANODE LOCATION
- TS TEST STATION LOCATION
- NEW MAINLINE
- NEW HYDRANT LOCATION

EXISTING FEATURES

- EXST AIR VACUM/RELEASE VAVLE (PLAN)
- EXST BLOWOFF ASSEMBLY (PLAN)
- 12"W EXST UTILITY, TYPE AND SIZE
- EXST HYDRANT LOCATION
- EXST GATE VALVE

GENERAL NOTES

1. OVERHEAD UTILITIES MAY NOT BE SHOWN. COORDINATE POWER POLE SUPPORT AND RELOCATION WITH THE UTILITY OWNERS.
2. PRESERVE EXISTING MONUMENTS, BENCH MARKS, RANGE TIES, PROPERTY MARKERS, REFERENCE POINTS, AND STAKES. SEE SPECIFICATION SECTION 01500.
3. DISPOSE OF ITEMS TO BE DEMOLISHED OR REMOVED AND CONSTRUCTION DEBRIS OFF SITE.
4. PROTECT EXISTING SURFACE IMPROVEMENTS NOT DESIGNATED FOR DEMOLITION OR REMOVAL AND REPLACEMENT. RESTORE DAMAGED EXISTING IMPROVEMENTS AND THOSE IMPROVEMENTS THAT HAVE BEEN REMOVED OR TEMPORARILY RELOCATED TO A CONDITION EQUAL TO OR BETTER THAN PRIOR TO CONSTRUCTION.
5. STATIONING AND DISTANCES SHOWN ON THE DRAWINGS ARE BASED ON HORIZONTAL MEASUREMENTS. CROSS SECTIONS, CROSSING DETAILS, AND REFERENCES TO LEFT AND RIGHT ON THE DRAWINGS ASSUME LOOKING IN THE DIRECTION OF INCREASING STATION ALONG PIPELINE ALIGNMENT.
6. UNLESS OTHERWISE NOTED, PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
7. DATE OF AERIAL MAPPING:
   SURVEY DATED APRIL 12, 2005
   AERIALS SURVEYING INTERNATIONAL, LLC.
   STATIC SURVEY DATED DECEMBER 2004
   HORIZONTAL DATUM IS NAD 83 (1992), COLORADO CENTRAL ZONE
   VERTICAL DATUM IS THE NAVD 88
   UNITS ARE IN US SURVEY FEET
8. INSTALL TEST STATIONS, PLUG VALVES, DISMANTLING JOINTS, EXPANSION JOINTS AND FRP PIPE, AS PROVIDED BY OWNER.
9. "BURY DEPTH" ON PLAN AND PROFILE DRAWINGS IS DISTANCE FROM FINISHED GRADE TO TOP OF PIPE.
10. CONTACT UTILITY OWNERS AT LEAST 48 HOURS PRIOR TO MAJOR UTILITY CROSSING, CONSTRUCTION, AND SUPPORT. INSPECTOR MUST BE NOTIFIED 48 HOURS PRIOR TO CONSTRUCTION NEAR UTILITIES.

POTHOLE DATA

PH #	NORTHING	EASTING	SURFACE ELEVATION	DESCRIPTION	INVERT OF PIPE ELEVATION
PH-3B	165232.24	91278.12	X	FO	X
PH-3C	165169.71	91228.43	5978.27	ELEC 38"T	X
PH-7	165264.19	91315.54	5975.98	FO 2-1.5" D-39	5972.48
PH-7A	165269.43	91322.31	5975.76	FO 2-1.5" D-69	5969.76
PH-8B	165244.91	91286.41	5977.27	FO 4-1.5" D-34	5973.94
PH-9	165162.93	91234.90	5977.48	30" WAT D-5.5	5969.48
PH-10	165155.72	91234.99	5978.51	25" ELEC D-25	5974.35
PH-84	165232.10	91379.13	5959.24	42" RCP SS 7'D-CL	5948.74
PH-85	165223.49	91387.86	X	NPW	5951.62
PH-86	165219.54	91383.72	X	NPW	5951.61
PH-87	165236.90	91382.41	5959.01	42" RCP SS 7'D CL	5948.51
PH-100	165264.45	91317.64	5976.24	FO 91" DP 2 2"	5968.32
PH-101	165412.46	91212.50	5973.30	6" WAT 71" DP	5972.38
PH-105	165202.79	91258.56	5978.50	GAS 43"T	X
PH-106	165196.57	91259.85	5978.67	FO 43"T	X

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COLORADO SPRINGS UTILITIES
NON-POTABLE WATER DESIGN APPROVAL
DATE: 1/29/07 BY: David L Franson

4/5

COLORADO REGISTERED PROFESSIONAL ENGINEER
STEPHANIE JO KINSMAN
39346
1/23/07

Designed By: S KINSMAN
Detailed By: L STUDER
Checked By: S KINSMAN

ISSUE RECORD

NO.	DESCRIPTION	DATE
A	65% DESIGN REVIEW	01/03/07
1	APPROVED FOR CONSTRUCTION	01/16/07

ROCKRIMMON CONSTRUCTORS
A SENAKCHEN HILL JOINT VENTURE

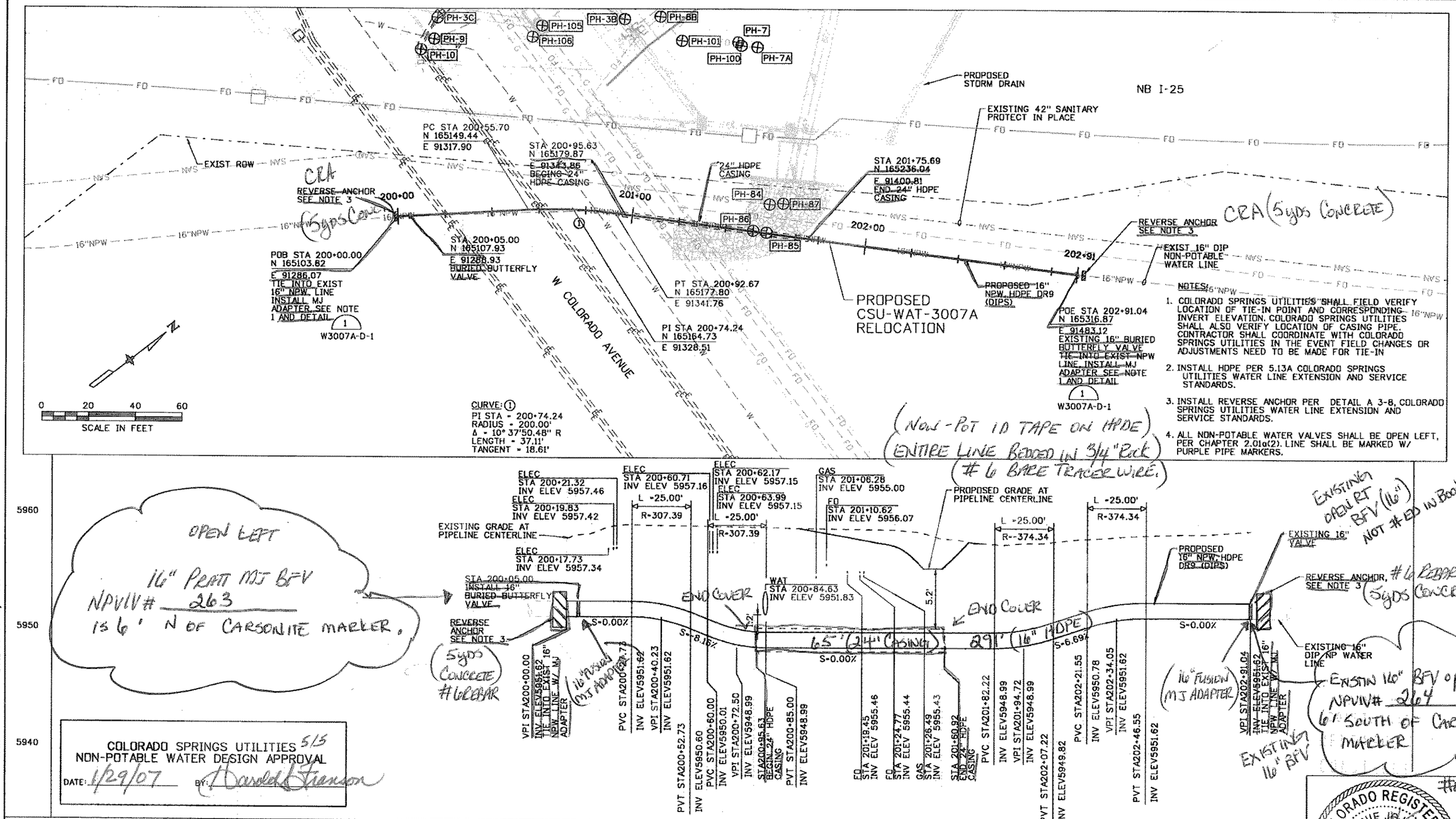
COSMIX. COLORADO SPRINGS METRO INTERSTATE EXPANSION

DESIGN SEGMENT 1
KEY PLAN AND GENERAL NOTES
WATER RELOCATION: CSU-WAT-3007A
WORK ORDER NO. 045-0
PROJECT NO. 2007-N001 RMS NO. 1511521

Project No./Code
IM 0252-370
S.A. 14740

File Name DSI-UTGE-W3007A-04.DGN
Drawing Number W3007A-G-4

Date Plotted: 01/24/2007
Time Plotted: 1:48:59 PM
Plotted By: $username
CAD Ver.: MicroStation V8 2004
WO No. 045-0 327504.DS1 Utility
Scale: Not to Scale Units: US Survey Foot



NOTES:

1. COLORADO SPRINGS UTILITIES SHALL FIELD VERIFY LOCATION OF TIE-IN POINT AND CORRESPONDING INVERT ELEVATION. COLORADO SPRINGS UTILITIES SHALL ALSO VERIFY LOCATION OF CASING PIPE. CONTRACTOR SHALL COORDINATE WITH COLORADO SPRINGS UTILITIES IN THE EVENT FIELD CHANGES OR ADJUSTMENTS NEED TO BE MADE FOR TIE-IN
2. INSTALL HDPE PER 5.13A COLORADO SPRINGS UTILITIES WATER LINE EXTENSION AND SERVICE STANDARDS.
3. INSTALL REVERSE ANCHOR PER DETAIL A 3-8, COLORADO SPRINGS UTILITIES WATER LINE EXTENSION AND SERVICE STANDARDS.
4. ALL NON-POTABLE WATER VALVES SHALL BE OPEN LEFT, PER CHAPTER 2.01a(2). LINE SHALL BE MARKED W/ PURPLE PIPE MARKERS.

Date Plotted: 01/24/2007
Time Plotted: 1:52:15 PM
Plotted By: $username
CAD Ver.: MicroStation V8 2004
Scale: 20 at 11x17
Units: US Survey Foot
WO No. 045-0
327504.DSI
Utility

Designed By: S KINSMAN	ISSUE RECORD		
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ROCKRIMMON CONSTRUCTORS
A SEMASCON HILL JOINT VENTURE

COSMIX
COLORADO SPRINGS METRO INTERSTATE EXPANSION

DESIGN SEGMENT 1

PLAN AND PROFILE
WATER RELOCATION: CSU-WAT-3007A
WORK ORDER NO. 045-0
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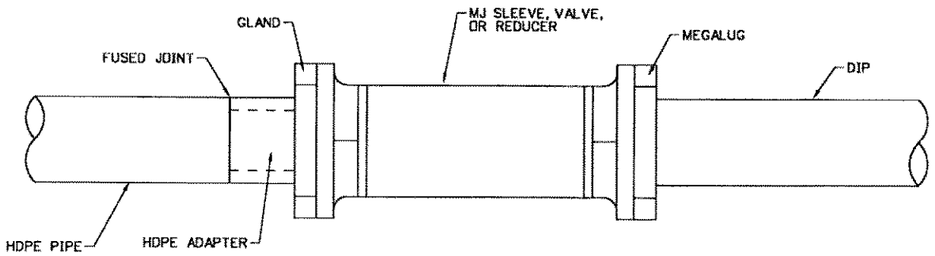
Project No./Code
IM 0252-370
S.A. 14740

File Name DSI-UTPP-W3007A-01.DGN

Drawing Number W3007A-PP-1



MJ ADAPTER (1)
NTS
W3007A-PP-1

Date Plotted: 01/24/2007
Time Plotted: 1:55:29 PM
Plotted By: $username
CAD Ver.: MicroStation V8 2004
WO No. 045-0 327504.DS1 Utility
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ROCKRIMMON CONSTRUCTORS
A SENAGHEN HILL JOINT VENTURE

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COLORADO SPRINGS METRO INTERSTATE EXPANSION

DESIGN SEGMENT 1

DETAIL SHEET 1
WATER RELOCATION: CSU-WAT-3007A
WORK ORDER NO. 045-0
PROJECT NO. 2007-N001 RMS NO. 1511521

Project No./Code
IM 0252-370
S.A. 14740

File Name DSI-UTDT-W3007A-01.DGN
Drawing Number W3007A-D-1

COLORADO REGISTERED PROFESSIONAL ENGINEER
STEPHANIE JO KINSMAN
39346
1/23/07