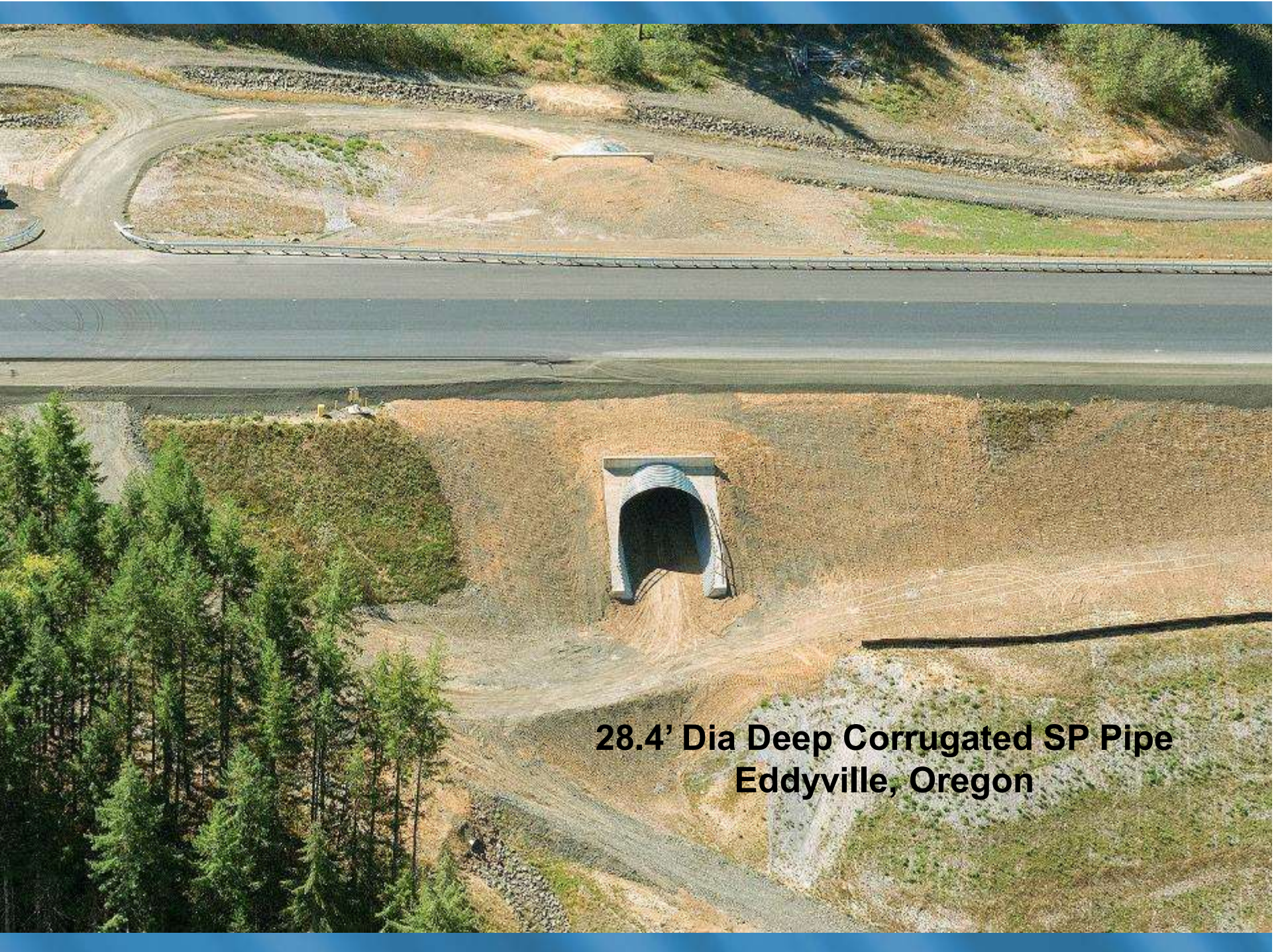


NCSPA Project of the Year Nominees



- **ODOT Pipe Procurement – Eddyville, OR**
- **I-70 Over Deer Creek Bridge – Shawnee Co, KS**
- **Hardin Valley Middle School – Knox Co, TN**
- **Texas Pacifico Bridge Replacement – Talpa, TX**



**28.4' Dia Deep Corrugated SP Pipe
Eddyville, Oregon**

Project Details

- Wildlife crossing with step beveled ends
- Specified and designed by Oregon DOT – their first deep corrugated SP project
- Bridge and concrete box also considered but were cost prohibitive.
- Deep corrugated SP was preferred because of flexibility and ability to accommodate anticipated ground movements in active landslide area
- Categories: SP, DOT



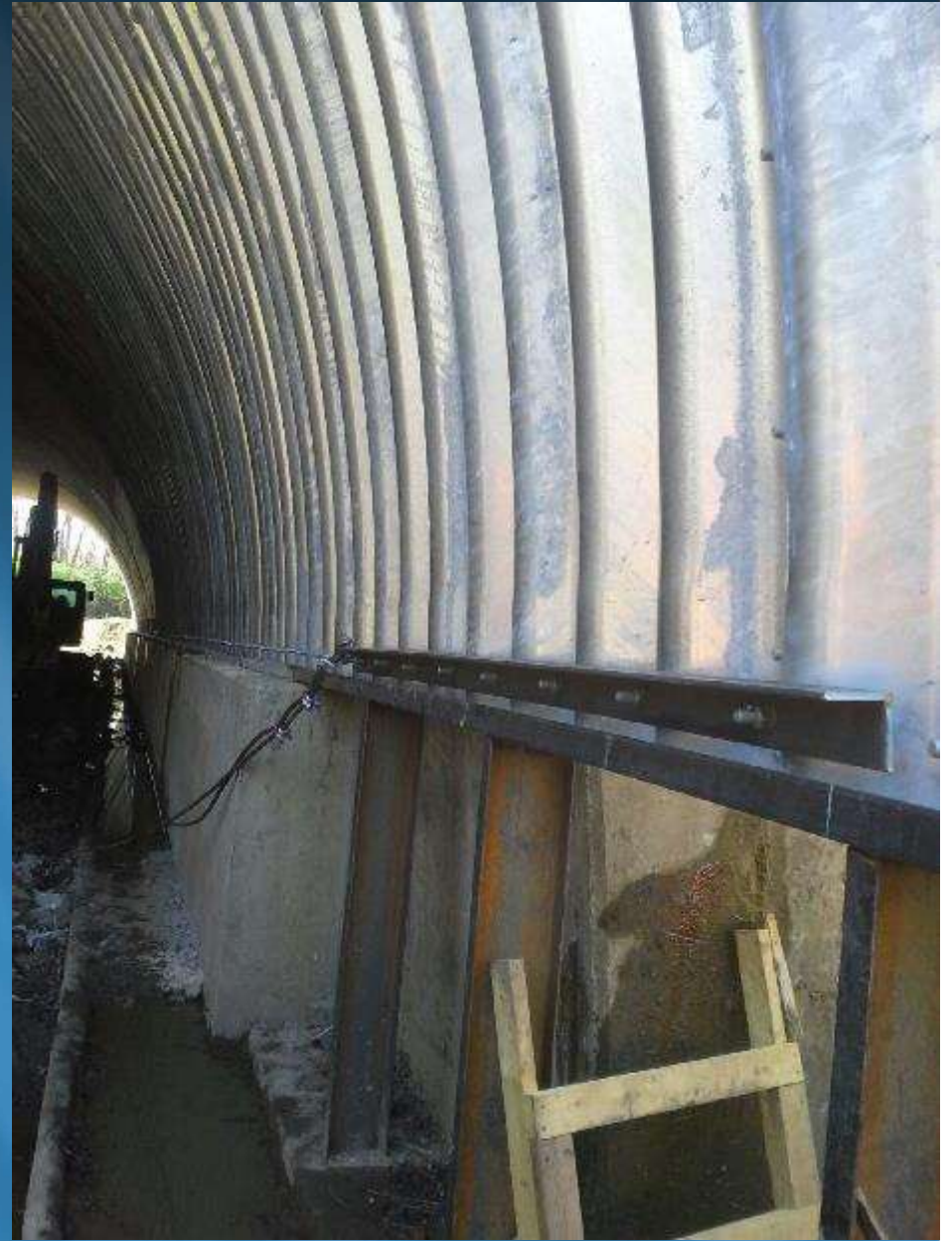






I-70 Over Deer Creek Buried Bridge – Shawnee County, Kansas

- **41.3' span x 21.3' rise deep corrugated SP arch for rehab of existing concrete arch under I-70 constructed in 1959.**
- **Arch geometry was customized to fit inside existing concrete arch**
- **Buried Bridge designed to carry all design loads – no additional support considered from existing structure**
- **Load rating required. KDOT did not have a load rating procedure for deep corrugated SP. Worked with rating engineer to develop a procedure to comply with KDOT specifications**
- **Categories: SP, DOT, Rehabilitation**





Significant Project Delays Due to Flooding

Project included jacking two RCP adjacent to arch









NCSPA 2017 Project of the Year
Hall of Fame Category



14th Street Improvements (Phase II) – lane widening

Ocala, Florida

Details:

- ULTRA FLO[®] ALT2 16 GA, 3x1 and 2 2/3 x 1/2 corrugations
- 5,2800 LF
- Diameters: 18-in. to 72-in.

Completed Date:

1986

Solution

- VE vs. RCP
- ALT2 for durability and to meet service life requirements of the project – 75 years.
- \$50,000 savings over RCP



14th Street Improvements (Phase II)

Ocala, Florida

Coupon obtained in 2016 inspection (30
years later)

Inspection

- 30 years later
- “Core Samples yielded excellent results. Pipe is in great condition and performed as expected.”





NCSPA 2017 ANNUAL MEETING

Projects Of The Year



Multi-Purpose Storm Water Management System at John Rolfe Square

NCSIPA



STEEL: PROVEN 100-YEARS STRONG
PROJECTS OF THE YEAR



- **40-Lot Single-Family Residential**
- **Richmond, VA Area**



Multi-Purpose Storm Water Management System at John Rolfe Square

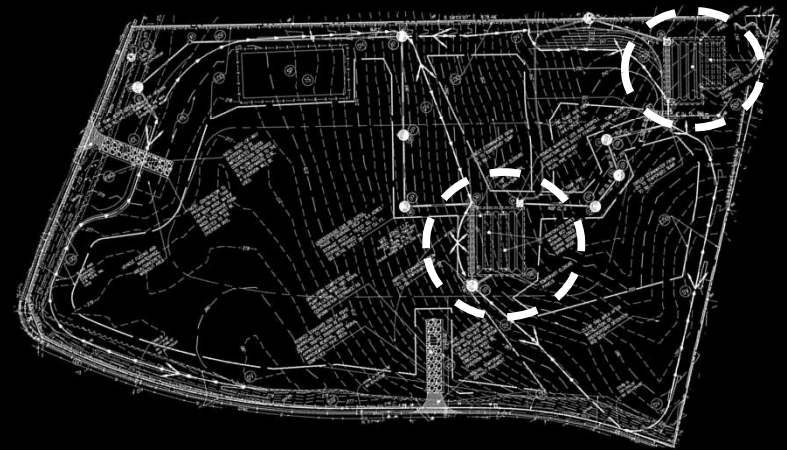
NCSIPA



STEEL: PROVEN 100-YEARS STRONG
PROJECTS OF THE YEAR



Storm Water Management Areas



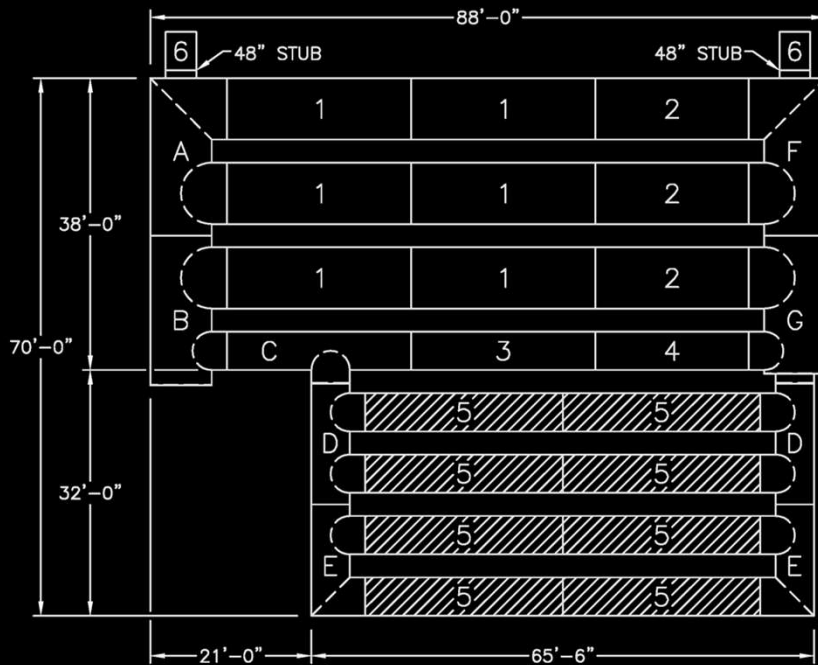


Multi-Purpose Storm Water Management System at John Rolfe Square

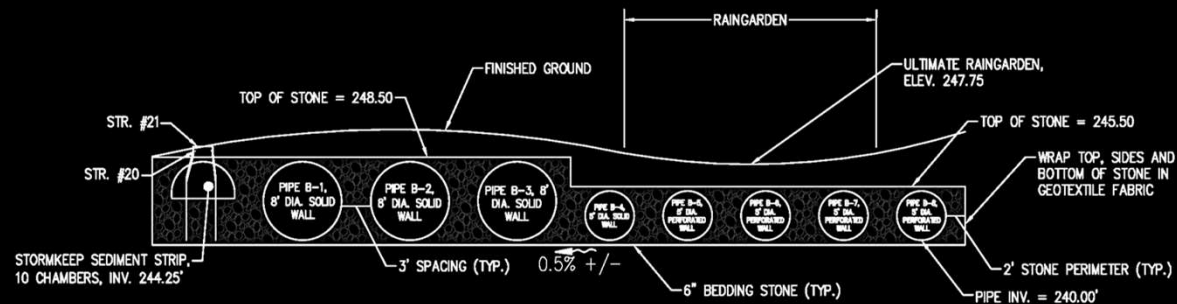
NCSIPA



STEEL: PROVEN 100-YEARS STRONG
PROJECTS OF THE YEAR



- **Temporary Sediment Basin**
- **Detention System**
- **Infiltration System**
- **Bioretention/Raingarden**



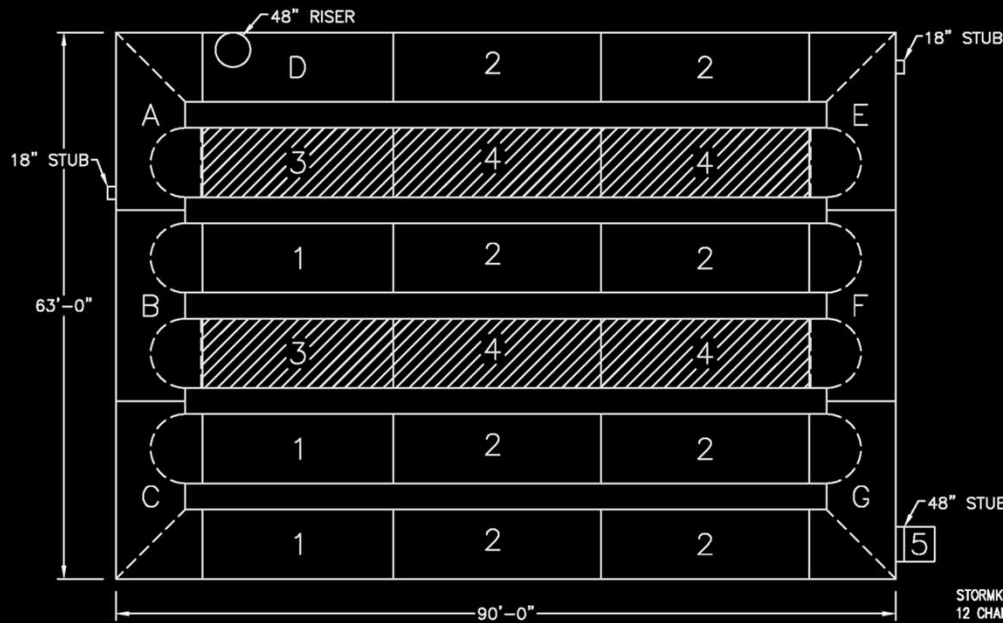


Multi-Purpose Storm Water Management System at John Rolfe Square

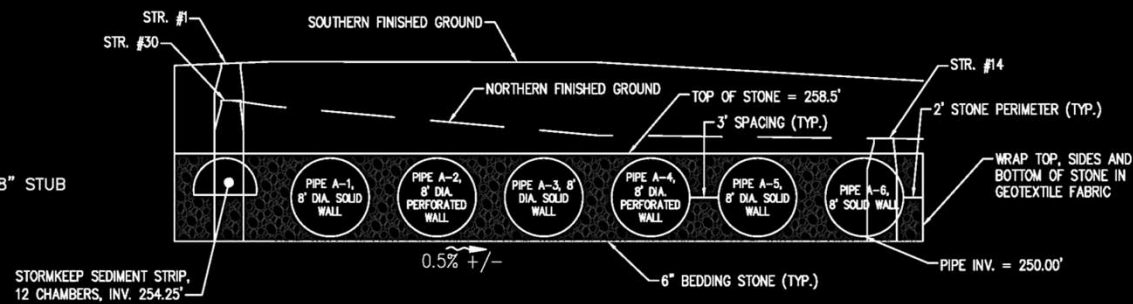
NCSIPA



STEEL: PROVEN 100-YEARS STRONG
PROJECTS OF THE YEAR



- Temporary Sediment Basin
- Detention System
- Infiltration System





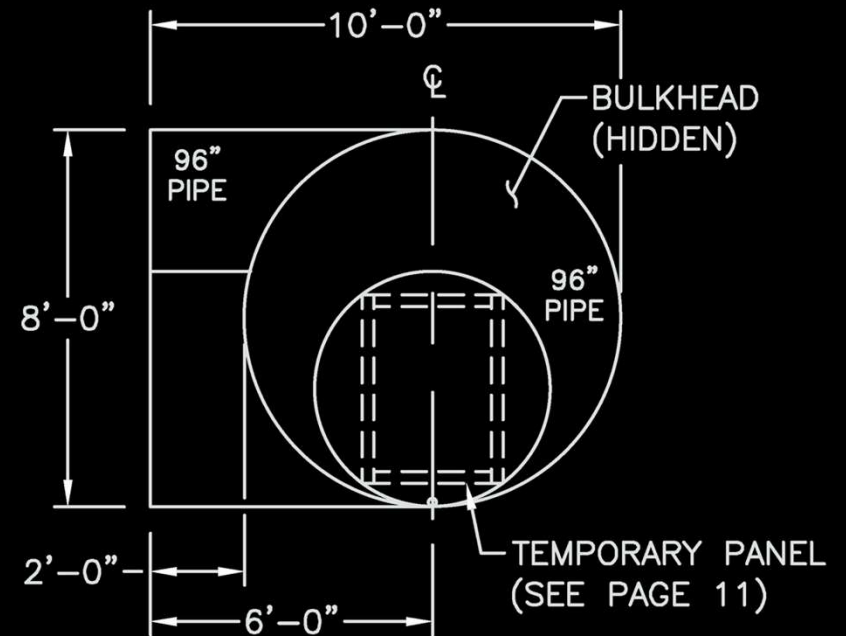
Multi-Purpose Storm Water Management System at John Rolfe Square



NCSIPA



STEEL: PROVEN 100-YEARS STRONG
PROJECTS OF THE YEAR





Multi-Purpose Storm Water Management System at John Rolfe Square

Typical Sediment Basin vs Multi-Purpose SWMS

- **Install Now vs Later**
- **Temporary vs Permanent**
- **Excavated Pond vs Buried Pipe**
- **Filled-in Later vs Repurposed**
- **Lot Developed Later vs Now**

NCSIPA



STEEL: PROVEN 100-YEARS STRONG
PROJECTS OF THE YEAR

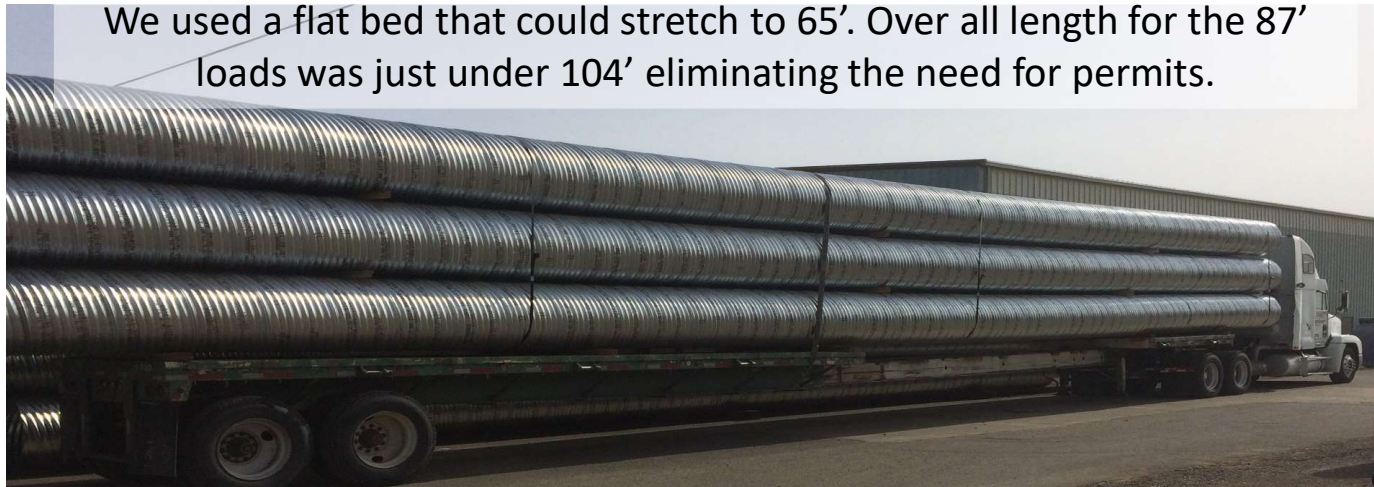




600 Tons of 32" Galvanized CSP in Lengths from 50' up to 87' and Packaged in 9 Piece Bundles



We used a flat bed that could stretch to 65'. Over all length for the 87' loads was just under 104' eliminating the need for permits.





America Center was built on a former landfill site. Our pipe was used to encase 15" concrete piles which serve as a foundation for the office building and parking structure. The pipe isolated the refuse from the piles which were being driven.



The foundation piles were driven through our CSP all the way to bed rock, which was approximately 150' below ground.





America Center Phase 2

Alviso, CA





TrueNorth Steel

2016 Project of the Year
Corrugated Steel Pipe and Rehabilitation Projects

Rail Road Bridge Rehabilitation – Douglas Wyoming

Corrugated Steel Pipe and Rehabilitation

108" Diameter
 10 gauge Galv.
 3 runs @ 80'
 5" x 1" corrugation
 CSP headwalls

LAYOUT	IDM. INSP.:	WELDER:	WELD INSP.:	COATING:	COAT. INSP.:	COMP. DATE:	HEAT #:
QC							

SL ITEM#	SHOP MARK	ITEM QTY	DESCRIPTION	REMARKS	WEIGHT/LBS.
HG10810F40		1	3	CSP Helical Galv 108" 10 Ga 5X1-40'	7320.00
HWWG10810F20SO-001		2	6	Headwall Asm 108" Single, One, 5x1, 20'	5127.09
WWLG14048X156-001		3	4	Wing Wall, Galv, 14GA, 48"W x156"H	572.61
WWLG14039X156-001		4	4	Wing Wall, Galv, 14GA, 39"W x156"H	500.28
BG10812T24		5	6	BAND, GALV 108" 12 GA 2 PC STD 24" WIDE	218.34
CC100220		6	18	Weldment, Pad Eye, 10K	9.52
BOLT.625X2-ED-USMM		7	172	Bolthex 5/8"-11x2" A307/F1941 ClFeZn8	.26
WSH.625-ED-USMM		8	328	Washer, Circular 5/8 F436 Type1/F1941	.03
NUT.625-ED-USMM		9	172	Nut 5/8-11 A563DH/F1941	.08
L3x3x1/4-A572G50		10	4	Angle, 3"x3"x1/4", A572 Gr50	186 in 68.91
L4x4x3/8-A572G50		11	4	Angle, 4"x4"x3/8", A572 Gr50	10 in 8.08
FB3/8X4-14.25		12	2	Top Gusset - Flat Bar Flat Bar, 3/8"x4", A36	14.250 in 5.98
FB3/8X4-14.25		18	2	Top Gusset - Flat Bar Flat Bar, 3/8"x4", A36	14.250 in 5.98

SECTION E-E
HEADWALL TO HEADWALL BOLTS TYP.

L3x3x1/4 BRACE FROM WINGWALL TO PIPE BOLT-ON (TYP @ EA. CORNER)

DETAIL R
ADDITIONAL BRACING

NOTES

- HEADWALLS SHALL BE ASSEMBLED AND LABELED IN YARD PRIOR TO SHIPMENT AS LABELED ON PG 1 TO ENSURE BOLT ALIGNMENT
- ANGLE IRON BRACING MAY VARY DUE TO LOCATION OF CORRUGATIONS
- ALL WELDS ON FRONT SIDE OF HEADWALL SHALL BE CONTINUOUS
- LAP SHEETS AS REQUIRED FOR BEST FIT
- CORRUGATIONS IN PIPE HIDDEN FOR CLARITY
- SOME HIDDEN LINES OMITTED FOR CLARITY
- THE FOLLOWING SHEET SECTIONS ARE MINIMUM ACCEPTABLE FOR CONSTRUCTING THE HEADWALL AND WINGWALLS:
 2 2/3 X 1/2 14GA
 3 X 1 16 GA
 5 X 1 16 GA
- THIS DRAWING IS MODELED FOR 2 2/3 X 1/2 - 14GA. LIFTING HOOK CENTER OF GRAVITY TO BE SHOP DETERMINED

ECN #	REV	DATE	DESCRIPTION	BY
E2016-0097	2	2/15/2016	ADD WING-WALL BRACING	DMA
E2015-0497	1	12/23/2015	UPDATED BOM WINGWALLS W/ PN, ASM WEIGHTS CORRECTED	DMA
E2015-0497	0	12/18/2015	RELEASED	DMA

REVISIONS	DESCRIPTION

THIS DESIGN IS PROPERTY OF TRUENORTH STEEL. REPRODUCTION WITHOUT WRITTEN PERMISSION IS STRICTLY PROHIBITED.	
DESCRIPTION: Headwall Asm 108" Triple, Both, 5x1, 80'	
DRAWN BY: DMA	DATE: 11/23/2015
CHECKED: TSEEGER	DATE: 12/29/2015
DATE: 12/29/2015	QTY: 3 OF 7

Corrugated Steel Pipe and Rehabilitation



Rail Road Bridge Rehabilitation – Douglas Wyoming

Corrugated Steel Pipe and Rehabilitation



Rail Road Bridge Rehabilitation – Douglas Wyoming

Corrugated Steel Pipe and Rehabilitation



Rail Road Bridge Rehabilitation – Douglas Wyoming