EAST CANYON STATE PARK
RECREATION REHABILITATION PHASE III
DFCM # 04015510

State of Utah—Department of Administrative Services

DIVISION OF FACILITIES CONSTRUCTION
AND MANAGEMENT

4110 State Office Building/Salt Lake City, Utah 84114/538-3018

DRAWING LIST

SEQ. NO.	DRAWING NO.	DESCRIPTION
1.	526-418-766	Drawing List
1A.	526-418-767	Code Analysis
1B.	526-418-785	Code Analysis
2.	526-418-768	Location and Vicinity Maps
3.	526-418-769	Symbols and General Notes
4.	526-418-740	Big Rock Site Plan
5.	526-418-741	Big Rock Existing Site Conditions and Demolition Plan (Sheet 1 of 2)
6.	526-418-742	Big Rock Existing Site Conditions and Demolition Plan (Sheet 2 of 2)
7.	526-418-743	Big Rock Entrance Road, Plan and Profile
8.	526-418-744	Big Rock Loop Road 1, Plan and Profile – Sta. 0+00 to Sta. 6+00
9.	526-418-745	Big Rock Loop Road 1, Plan and Profile – Sta. 6+00 to Sta. 7+93.52
10.	526-418-746	Big Rock Loop Road 2, Plan and Profile – Sta. 0+00 to Sta. 5+50
11.	526-418-747	Big Rock Loop Road 2, Plan and Profile – Sta. 5+50 to Sta. 9+95.11
12.	526-418-748	Big Rock Cul-De-Sac Road, Plan and Profile – Sta. 0+00 to Sta. 5+46.72
13.	526-418-749	Big Rock Accessible Walkway Plan and Profile
14.	526-418-750	Big Rock Campground, Finish Grading Points Campsite Nos. 1-14
15.	526-418-751	Big Rock Campground, Finish Grading Points Campsite Nos. 24-35
16.	526-418-752	Big Rock Campground, Finish Grading Points Campsite Nos. 15-23
17.	526-418-753	Big Rock Campground, Day Use Parking Plan
18.	526-418-770	River Edge Existing Site Conditions and Demolition Plan
19.	526-418-771	River Edge Finish Site Plan
20.	526-418-772	River Edge Grading Plan
21.	526-418-773	River Edge Entrance Road Plan
22.	526-418-774	River Edge Entrance Road Profile
23.	526-418-775	River Edge Walkways, Plan and Profile
24.	526-418-776	Typical Pavement and Sidewalk Details
25.	526-418-777	Typical Spur Plans and Shelter Layouts
26.	526-418-778	Typical Shelter Concrete Pads and Sections
27.	526-418-779	24 by 44 Group Shelter, Plans and Typical Section
28.	526-418-780	Group Shelter – Typical Concrete, Detail and Sections
28A.	526-418-781	SST Accessible Toilet Building, Plan and Elevations – NOT INCLUDED IN THIS CONTRACT
28B.	526-418-782	Maintenance Building, Plans – NOT INCLUDED IN THIS CONTRACT
28C.	526-418-783	Maintenance Building, Elevations – NOT INCLUDED IN THIS CONTRACT
28D.	526-418-784	Maintenance Building, Wall Section – NOT INCLUDED IN THIS CONTRACT
29.	40-D-6263	General Notes and Minimum Requirements for Detailing Reinforcement
30.	40-D-7016	Chain Link Fencing

REV. NO		
1	2008-10-14 400 E. MANSEAU	ADDED NEW DRAWINGS TO LIST.

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK
RECREATION REHABILITATION – PHASE III
DRAWING LIST

DESIGNED _/S/ Emily Manseau_ CHECKED_/S/ Bart Leetlang_
DRAWN _/S/ Emily Manseau_ TECH. APPR. _/S/ Jay Bytheway, P.E._
JAY BYTHEWAY, P.E.
APPROVED _/S/ Scott Rich, P.E._
SCOTT RICH, P.E. – PEER REVIEWER

PROVO, UTAH 2008-5-22 526-418-766

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11-20-2008\526-418-766.dwg

MAINTENANCE BUILDING

CODE ANALYSIS

APPLICABLE CODES

	Year		Year
International Building Code	2006	National Electrical Code	2005
International Mechanical Code	2006	Uniform Code for Building Conservation	1997
International Fuel Gas Code	2006	ADA Accessibility Guidelines	1998
International Plumbing Code	2006	Architectural Barriers Act Accessibility Standards	2006
International Fire Code	2006		
International Energy Conservation Code	2006		

A. Occupancy and Group: U

Change in Use: Yes _____ No X Mixed Occupancy: Yes _____ No X
Special Use and Occupancy (e.g. High Rise, Covered Mall): _____

B. Seismic Design Category: D Design Wind Speed: 90 mph

C. Type of Construction (circle one):

I A | I B | II A | II B | III A | III B | IV HT | V A | (V B)

D. Fire Resistance Rating Requirements for the Exterior Walls based on the fire separation distance (in hours):

North: 0 South: 0 East: 0 West: 0

E. Mixed Occupancies: None Nonseparated Uses: _____

F: Sprinklers:

Required: None Provided: None

Type of Sprinkler System (IBC 903.3.1)_____

G: Number of Stories: 1 Building Height: 8 ft.

H: Actual Area per Floor (square feet): 400

I: Tabular Area: (table 503): 5,500

J: Area Modifications: Not Used

K. Fire Resistance Rating Requirements for Building Elements (hours). (Tables 601 & 720.1(2))

Element	Hours	Assembly Listing	Element	Hours	Assembly Listing
Exterior Bearing Walls	0	None	Floors - Ceiling Floors	N/A	
Interior Bearing Walls	N/A		Roofs - Ceiling Roofs	0	None
Exterior Non-Bearing Walls	N/A		Exterior Doors and Windows	0	None
Structural Frame	N/A		Shaft Enclosures	N/A	
Partitions - Permanent	N/A		Fire Walls	N/A	
Fire Barriers	N/A		Fire Partitions	N/A	
			Smoke Partitions	N/A	

L. Design Occupant Load: 1 Table 1004.1.1

Exit Width Required: 32" Exit Width Provided: 36"

M. Minimum Number of Required Plumbing Facilities: Not Applicable

This structure is not heated and has no utilities.

SST ACCESSIBLE TOILET BUILDINGS

CODE ANALYSIS

APPLICABLE CODES

	Year		Year
International Building Code	2006	National Electrical Code	2005
International Mechanical Code	2006	Uniform Code for Building Conservation	1997
International Fuel Gas Code	2006	ADA Accessibility Guidelines	1998
International Plumbing Code	2006	Architectural Barriers Act Accessibility Standards	2006
International Fire Code	2006		
International Energy Conservation Code	2006		

A. Occupancy and Group: U

Change in Use: Yes _____ No X Mixed Occupancy: Yes _____ No X
Special Use and Occupancy (e.g. High Rise, Covered Mall): _____

B. Seismic Design Category: D Design Wind Speed: 90 mph

C. Type of Construction (circle one):

I A | I B | II A | II B | III A | III B | IV HT | V A | (V B)

D. Fire Resistance Rating Requirements for the Exterior Walls based on the fire separation distance (in hours):

North: 1 South: 1 East: 1 West: 1

E. Mixed Occupancies: None Nonseparated Uses: _____

F: Sprinklers:

Required: None Provided: None

Type of Sprinkler System (IBC 903.3.1)_____

G: Number of Stories: 1 Building Height: 8 ft.

H: Actual Area per Floor (square feet): 145

I: Tabular Area: (table 503): 5,500

J: Area Modifications: Not Used

K. Fire Resistance Rating Requirements for Building Elements (hours). (Tables 601, 720.1(2), & 720.1(3))

Element	Hours	Assembly Listing	Element	Hours	Assembly Listing
Exterior Bearing Walls	1	4-1.1	Floors - Ceiling Floors	N/A	
Interior Bearing Walls	N/A		Roofs - Ceiling Roofs	1	1-1.1
Exterior Non-Bearing Walls	N/A		Exterior Doors and Windows	0	None
Structural Frame	N/A		Shaft Enclosures	N/A	
Partitions - Permanent	1	4-1.1	Fire Walls	N/A	
Fire Barriers	N/A		Fire Partitions	N/A	
			Smoke Partitions	N/A	

L. Design Occupant Load: 2

Exit Width Required: 32" Exit Width Provided: 36"

M. Minimum Number of Required Plumbing Facilities: Not Applicable

This structure is not heated and has no utilities.

FOOTNOTES:

1) In case of conflict with the U.S. Department of Justice Federal Registers Parts I through V - ADA Guidelines and specific reference to the International Building Code Accessibility Chapters, the more restrictive requirement shall govern.

2) Additional Code Information shall be provided at the discretion of the Building Official for Complex Buildings. Including, but not limited to:
   a) High Rise Requirements.
   b) Atriums.
   c) Performance Based Criteria.
   d) Means or Egress Analysis.
   e) Fire Assembly Locator Sheet.
   f) Exterior and Interior Accessibility Route.
   g) Fire Stopping, Including Tested Design Number.

DEFERRED SUBMITTALS

1. *Submit a photovoltaic power system design as per Section 13650 of the specifications.*
2. *If Alternate 1 is awarded State Parks will submit structural drawings and calculations from the manufacturer of the group shelter to USBR and DFCM for review and approval.*
3. *State Parks will submit the truss manufacturer's calculations for the maintenance building to USBR and DFCM for review and approval.*

DESIGN DATA

1. *Snow Loading – 100 psf ground*
2. *Wind Loading – 90 mph exposure C*
3. *Frost Depth – 36 inches*
4. *Seismic Category – D*
5. *Location – 40°53'40" North, 111°34'56" West*
6. *Elevation – 5700 feet*

SPECIAL INSPECTIONS

1. *Soils testing as per Section 02302 – Compacting Earth Materials.*
2. *Concrete testing as per Section 03300 – Cast-in-place Concrete.*
3. *Epoxy anchored bolts as per Drawing 526-418-778.*
4. *Certifications by submittal for bituminous surfacing.*
5. *Sampling and testing will be done by Reclamation.*
6. *Precast concrete manufacturers shall be PCI certified.*
7. *Steel fabricators shall be AISC certified.*
8. *Wood truss manufacturers shall be inspected quarterly by the International Accreditation Service or an equivalent approved third party inspection service.*

NOTE

1. *Concrete walkways constructed in this project are subject to ABAAS 705, ABAAS Chapter 4, and ADAAG 4.3 except for Walkway 2 between Stations 0+00 and 0+35 on Drawing 526-418-775.*

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DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK
RECREATION REHABILITATION – PHASE III
CODE ANALYSIS

DESIGNED /S/ Jay Bytheway CHECKED /S/ David Yates, P.E.
DRAWN /S/ Jay Bytheway TECH. APPR. /S/ Jay Bytheway, P.E. JAY BYTHEWAY, P.E.
APPROVED /S/ Scott Rich, P.E. SCOTT RICH, P.E. – PEER REVIEWER

PROVO, UTAH 2008-5-22 526-418-767

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12 BY 12 SHELTERS

CODE ANALYSIS

APPLICABLE CODES

	Year		Year
International Building Code	2006	National Electrical Code	2005
International Mechanical Code	2006	Uniform Code for Building Conservation	1997
International Fuel Gas Code	2006	ADA Accessibility Guidelines	1998
International Plumbing Code	2006	Architectural Barriers Act Accessibility Standards	2006
International Fire Code	2006		
International Energy Conservation Code	2006		

A. Occupancy and Group: A-5

Change in Use: Yes _____ No X Mixed Occupancy: Yes _____ No X

Special Use and Occupancy (e.g. High Rise, Covered Mall): _____

B. Seismic Design Category: D Design Wind Speed: 90 mph

C. Type of Construction (circle one):

I/A I/B II/A II/B III/A III/B IV/HT V/A (V/B)

D. Fire Resistance Rating Requirements for the Exterior Walls based on the fire separation distance (in hours):

North: 0 South: 0 East: 0 West: 0

E. Mixed Occupancies: None Nonseparated Uses: _____

F: Sprinklers:

Required: None Provided: None

Type of Sprinkler System (IBC 903.3.1)_____

G: Number of Stories: 1 Building Height: 8 ft.

H: Actual Area per Floor (square feet): 144

I: Tabular Area: (table 503): Unlimited

J: Area Modifications: Not Used

K. Fire Resistance Rating Requirements for Building Elements (hours). (Tables 601 & 720.1(2))

Element	Hours	Assembly Listing	Element	Hours	Assembly Listing
Exterior Bearing Walls	N/A		Floors - Ceiling Floors	N/A	
Interior Bearing Walls	N/A		Roofs - Ceiling Roofs	0	None
Exterior Non-Bearing Walls	N/A		Exterior Doors and Windows	N/A	
Structural Frame	N/A		Shaft Enclosures	N/A	
Partitions - Permanent	N/A		Fire Walls	N/A	
Fire Barriers	N/A		Fire Partitions	N/A	
			Smoke Partitions	N/A	

L. Design Occupant Load: 8 IBC 1004.7

Exit Width Required: 32" Exit Width Provided: 100"

M. Minimum Number of Required Plumbing Facilities: Not Applicable

This is an open structure that is not heated and has no utilities.

16 BY 16 SHELTERS

CODE ANALYSIS

APPLICABLE CODES

	Year		Year
International Building Code	2006	National Electrical Code	2005
International Mechanical Code	2006	Uniform Code for Building Conservation	1997
International Fuel Gas Code	2006	ADA Accessibility Guidelines	1998
International Plumbing Code	2006	Architectural Barriers Act Accessibility Standards	2006
International Fire Code	2006		
International Energy Conservation Code	2006		

A. Occupancy and Group: A-5

Change in Use: Yes _____ No X Mixed Occupancy: Yes _____ No X

Special Use and Occupancy (e.g. High Rise, Covered Mall): _____

B. Seismic Design Category: D Design Wind Speed: 90 mph

C. Type of Construction (circle one):

I/A I/B II/A II/B III/A III/B IV/HT V/A (V/B)

D. Fire Resistance Rating Requirements for the Exterior Walls based on the fire separation distance (in hours):

North: 0 South: 0 East: 0 West: 0

E. Mixed Occupancies: None Nonseparated Uses: _____

F: Sprinklers:

Required: None Provided: None

Type of Sprinkler System (IBC 903.3.1)_____

G: Number of Stories: 1 Building Height: 8 ft.

H: Actual Area per Floor (square feet): 256

I: Tabular Area: (table 503): Unlimited

J: Area Modifications: Not Used

K. Fire Resistance Rating Requirements for Building Elements (hours). (Tables 601 & 720.1(2))

Element	Hours	Assembly Listing	Element	Hours	Assembly Listing
Exterior Bearing Walls	N/A		Floors - Ceiling Floors	N/A	
Interior Bearing Walls	N/A		Roofs - Ceiling Roofs	0	None
Exterior Non-Bearing Walls	N/A		Exterior Doors and Windows	N/A	
Structural Frame	N/A		Shaft Enclosures	N/A	
Partitions - Permanent	N/A		Fire Walls	N/A	
Fire Barriers	N/A		Fire Partitions	N/A	
			Smoke Partitions	N/A	

L. Design Occupant Load: 12 IBC 1004.7

Exit Width Required: 32" Exit Width Provided: 150"

M. Minimum Number of Required Plumbing Facilities: Not Applicable

This is an open structure that is not heated and has no utilities.

24 BY 44 GROUP SHELTER

CODE ANALYSIS

APPLICABLE CODES

	Year		Year
International Building Code	2006	National Electrical Code	2005
International Mechanical Code	2006	Uniform Code for Building Conservation	1997
International Fuel Gas Code	2006	ADA Accessibility Guidelines	1998
International Plumbing Code	2006	Architectural Barriers Act Accessibility Standards	2006
International Fire Code	2006		
International Energy Conservation Code	2006		

A. Occupancy and Group: A-5

Change in Use: Yes _____ No X Mixed Occupancy: Yes _____ No X

Special Use and Occupancy (e.g. High Rise, Covered Mall): _____

B. Seismic Design Category: D Design Wind Speed: 90 mph

C. Type of Construction (circle one):

I/A I/B II/A II/B III/A III/B IV/HT V/A (V/B)

D. Fire Resistance Rating Requirements for the Exterior Walls based on the fire separation distance (in hours):

North: 0 South: 0 East: 0 West: 0

E. Mixed Occupancies: None Nonseparated Uses: _____

F: Sprinklers:

Required: None Provided: None

Type of Sprinkler System (IBC 903.3.1)_____

G: Number of Stories: 1 Building Height: 8 ft.

H: Actual Area per Floor (square feet): 1056

I: Tabular Area: (table 503): Unlimited

J: Area Modifications: Not Used

K. Fire Resistance Rating Requirements for Building Elements (hours). (Tables 601 & 720.1(2))

Element	Hours	Assembly Listing	Element	Hours	Assembly Listing
Exterior Bearing Walls	N/A		Floors - Ceiling Floors	N/A	
Interior Bearing Walls	N/A		Roofs - Ceiling Roofs	0	None
Exterior Non-Bearing Walls	N/A		Exterior Doors and Windows	N/A	
Structural Frame	N/A		Shaft Enclosures	N/A	
Partitions - Permanent	N/A		Fire Walls	N/A	
Fire Barriers	N/A		Fire Partitions	N/A	
			Smoke Partitions	N/A	

L. Design Occupant Load: 84 IBC 1004.7

Exit Width Required: 32" Exit Width Provided: 216"

M. Minimum Number of Required Plumbing Facilities: Not Applicable

This is an open structure that is not heated and has no utilities.

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK

RECREATION REHABILITATION - PHASE III

CODE ANALYSIS

DESIGNED	/S/ Jay Bytheway	CHECKED	/S/ David Yates, P.E.
DRAWN	/S/ Jay Bytheway	TECH. APPR.	/S/ Jay Bytheway, P.E. JAY BYTHEWAY, P.E.
APPROVED	/S/ Scott Rich, P.E. SCOTT RICH, P.E. - PEER REVIEWER		

PROVO, UTAH 2008-5-22 526-418-785

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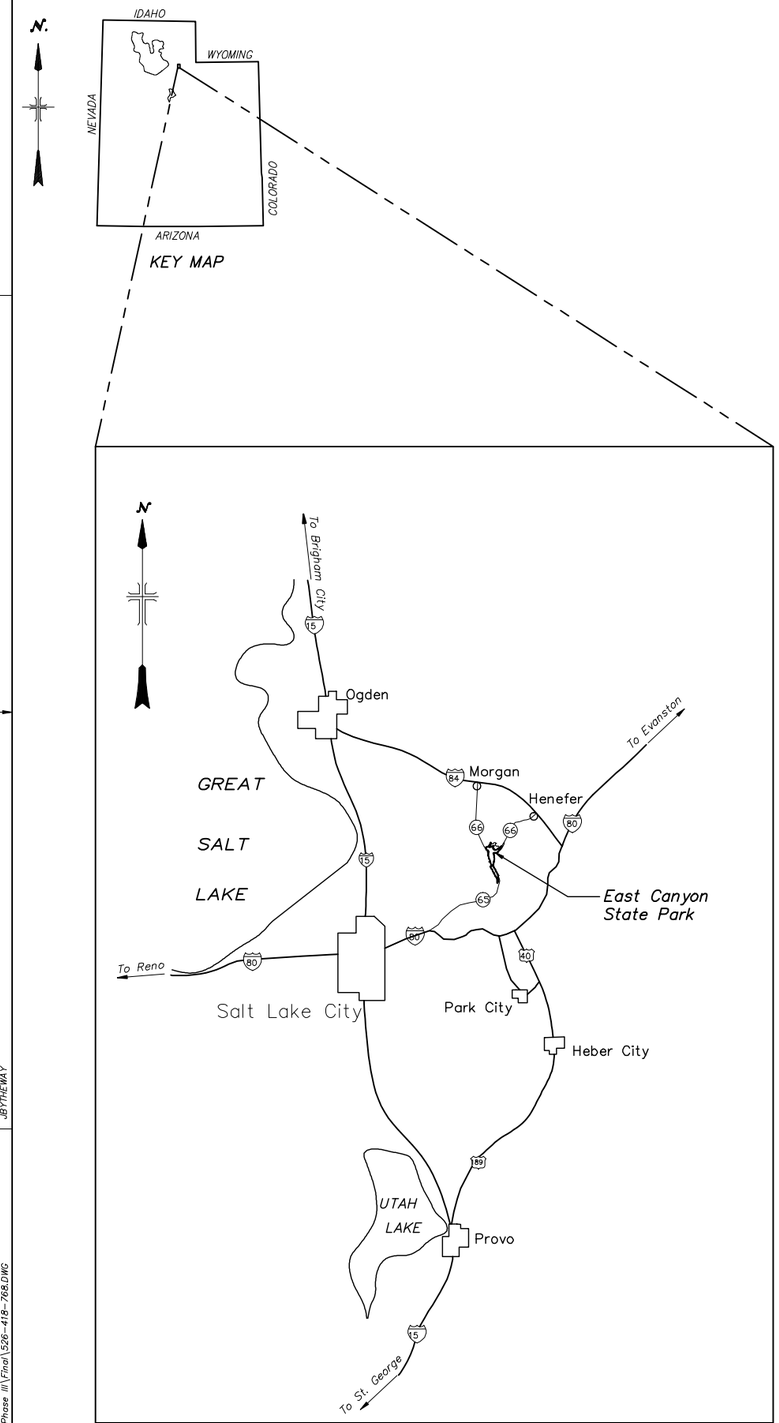

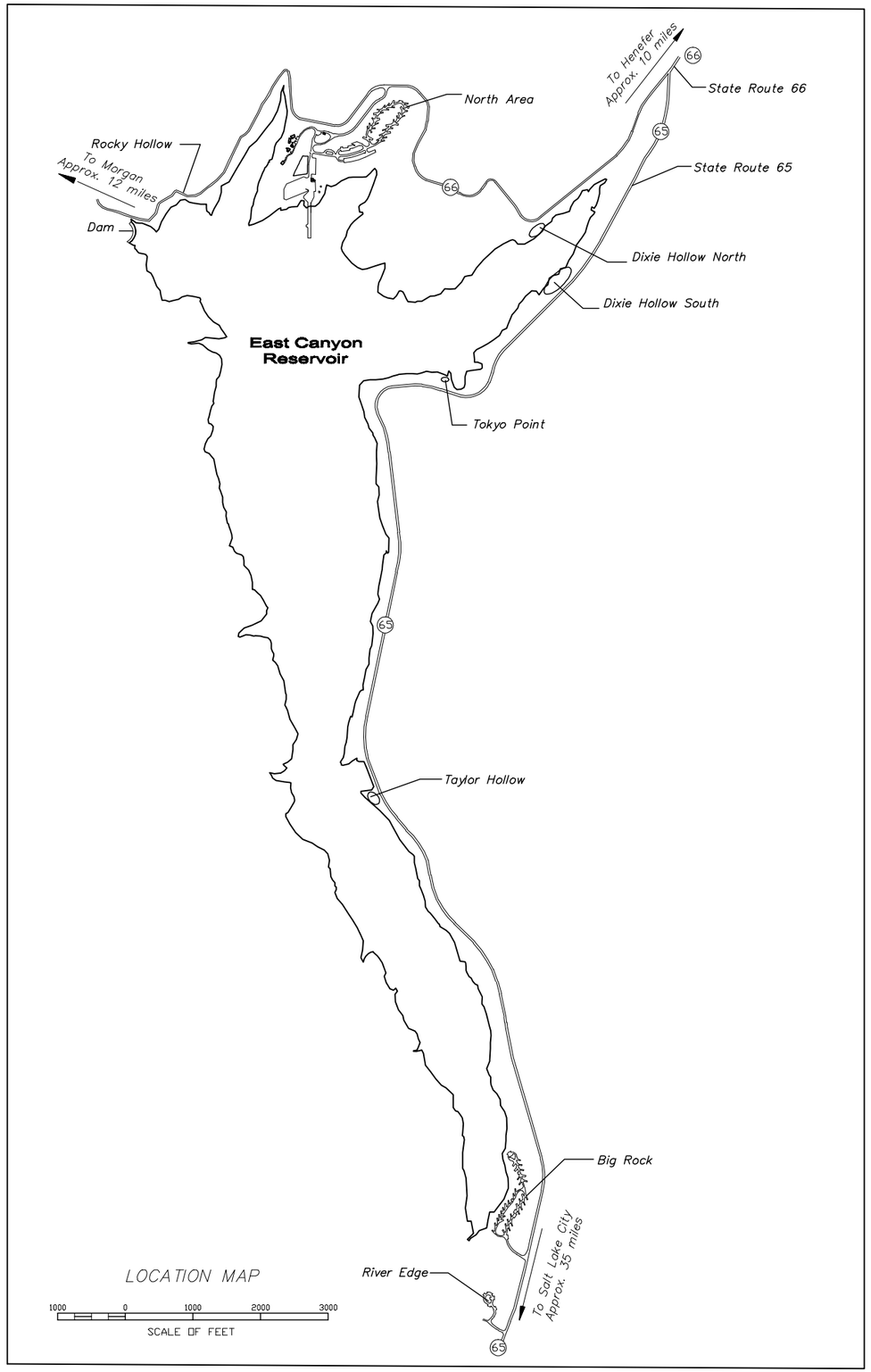

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WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK

RECREATION REHABILITATION – PHASE III

LOCATION AND VICINITY MAPS

DESIGNED	/S/ Emily Manseau	CHECKED	/S/ Bart Leeflang
DRAWN	/S/ Emily Manseau	TECH. APPR.	/S/ Jay Bytheway, P.E. JAY BYTHEWAY, P.E.
APPROVED	/S/ Scott Rich, P.E. SCOTT RICH, P.E. – PEER REVIEWER		

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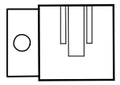
SYMBOLS


Shelter Pad (See Drawing 546-418-750 for more detail)

Vault toilet (Furnished and installed by others)

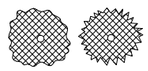
Wheelstop

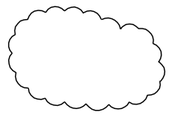
Drainage

Existing deciduous tree to remain in place

Existing evergreen tree to remain in place

Bush


Trees to be removed


Edge of existing trees

Existing feature to be removed

Tactile surfacing

Campsite number

Tent pad

GENERAL NOTES

1. The Contractor shall locate underground utilities prior to excavation to avoid any service interruptions. Utilities shall be restored to their original condition.
2. The Contractor shall protect all existing facilities during construction and shall replace or restore any facilities damaged as a result of construction activity at their own expense and as directed by the Government Inspector.
3. Primary control will be set by the Bureau of Reclamation survey crew.
4. All accessible site concrete and bituminous surfaces are to have a slope less than 1-1/2% in any direction unless noted on the drawings. Accessible routes shall be less than 4-1/2% running slope and zero to 1-1/2% cross slope.
5. Saw cut or tooled groove control joints to the depth of 1/4 the slab thickness.
7. Tactile warning surfaces shall shall have a heavy broom or approved finish and a 70% or greater change in color.

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BUREAU OF RECLAMATION

WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK
RECREATION REHABILITATION - PHASE III
SYMBOLS AND GENERAL NOTES

DESIGNED /S/ Jay Bytheway, P.E. CHECKED /S/ Bart Leeflang
DRAWN /S/ Jay Bytheway, P.E. TECH. APPR. /S/ Jay Bytheway, P.E.
JAY BYTHEWAY, P.E.
APPROVED /S/ Scott Rich, P.E.
SCOTT RICH, P.E. - PEER REVIEWER

PROVO, UTAH 2008-5-22 526-418-769

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JBYTHEWAY

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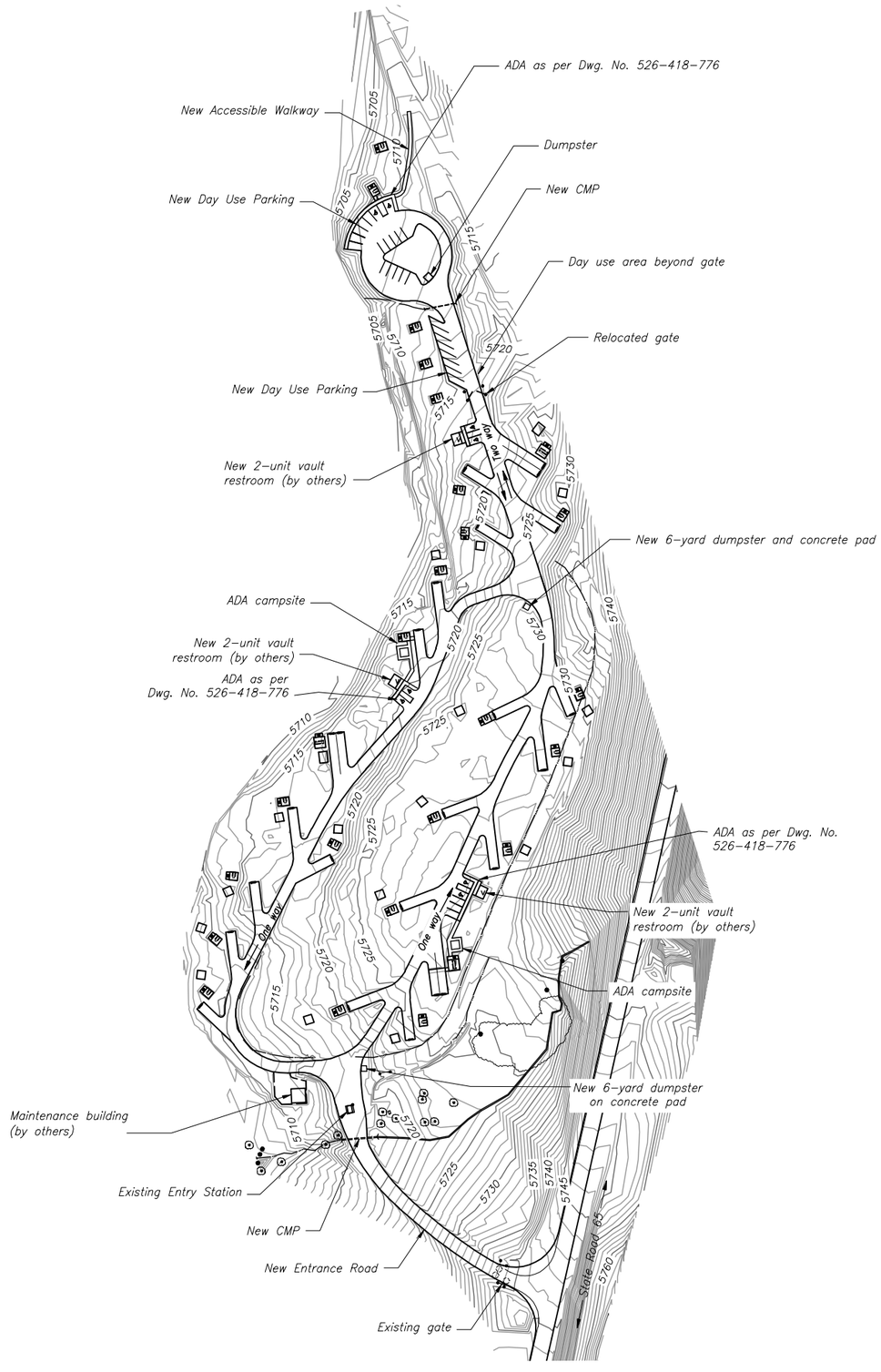

N.

NOTES

1. Contour interval is 1 foot.
2. Contours shown are finish grade.
3. Calculated cut = 4570 yards and calculated fill = 2290 yards. Decrease fill slopes as needed to dispose of extra cut material.
4. For Typical Accessible Parking Detail see Dwg.526-418-776.

REFERENCE DRAWINGS

EXISTING SITE CONDITIONS AND DEMOLITION PLAN SHEET 1 OF 2..... 526-418-741
EXISTING SITE CONDITIONS AND DEMOLITION PLAN SHEET 2 OF 2 526-418-742
BIG ROCK ENTRANCE ROAD PLAN AND PROFILE..... 526-418-743
BIG ROCK LOOP ROAD 1-PLAN AND PROFILE STA. 0+00 TO STA. 6+00..... 526-418-744
BIG ROCK LOOP ROAD 1-PLAN AND PROFILE STA. 6+00 TO STA. 7+93.52..... 526-418-745
BIG ROCK LOOP ROAD 2-PLAN AND PROFILE STA. 0+00 TO STA. 5+50..... 526-418-746
BIG ROCK LOOP ROAD 2-PLAN AND PROFILE STA. 5+50 TO STA. 9+65.11 526-418-747
BIG ROCK CUL-DE-SAC ROAD-PLAN AND PROFILE STA. 0+00 TO STA. 5+46.72..... 526-418-748
BIG ROCK ACCESSIBLE WALKWAYS 1 AND 2 PLAN AND PROFILE 526-418-749
BIG ROCK CAMPGROUND FINISH GRADING POINTS CAMPSITE NOS. 1-14 526-418-750
BIG ROCK CAMPGROUND FINISH GRADING POINTS CAMPSITE NOS. 24-35 526-418-751
BIG ROCK CAMPGROUND FINISH GRADING POINTS CAMPSITE NOS. 15-23 526-418-752
BIG ROCK CAMPGROUND DAY USE PARKING PLAN 526-418-753
TYPICAL PAVEMENT AND SIDEWALK DETAILS.... 526-418-776.

100 0 100 200 300
SCALE OF FEET

REV NO		
1	2008-09-24 400 E. MANSEAU	ADDED REFERENCE TO DWG. 526-418-776 FOR TYPICAL ACCESSIBLE PARKING AND SINAGE DETAIL.

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WEBER BASIN PROJECT

UTAH

EAST CANYON STATE PARK

RECREATION REHABILITATION - PHASE III

BIG ROCK SITE PLAN

DESIGNED /S/ Jay Bytheway, P.E. CHECKED /S/ Bart Leeflang
DRAWN /S/ Jay Bytheway, P.E. TECH. APPR. /S/ Jay Bytheway, P.E.
JAY BYTHEWAY, P.E.
APPROVED /S/ Scott Rich, P.E.
SCOTT RICH, P.E. - PEER REVIEWER

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526-418-741

EAST CANYON RESERVOIR

Existing concrete barrier, remove and dispose

Location of restroom removed by others

Existing entry station and fee pay post set on concrete slab to remain in place, see Note 3

Existing 30"Ø CMP to be removed and replaced

Existing 18" square bottom ditch to remain in place

Generator box

Existing entrance road from State Road 65

Existing trees, bushes, and ditches to remain in place

Existing gate to remain in place

Location of restroom removed by others

Old paved highway, remove and reuse as base for campground roads

Match Line - Sheet 2 (526-418-742)

LEGEND

- Gravel road/campsite spur
- Trail
- Drainage
- Guardrail
- Sign post/campsite marker
- Table anchor
- Grill
- Fire pit
- Picnic table
- Bush
- Tree
- Clump of trees/bushes
- Gate
- Concrete barrier

NOTES

1. Contour interval is 1 foot.
2. Contours shown are existing ground.
3. Structures, grills, fire pits, table anchors, and items not identified on this drawing shall be demolished unless specified otherwise. The majority of items shown on this drawing have already been removed and have been stock piled on the old paved highway.
4. Road signs shall be identified and removed on a case by case basis in the field.
5. Remove or bury stock piled items on the old paved highway as per the specifications.
6. Rocks and boulders are to be stockpiled on the old paved highway near the gate. Move existing rocks and boulders only as needed to make room for new construction.
7. Preserve as much vegetation as possible during demolition and construction operations.
8. Remove large rocks to the satisfaction of the Park Manager.

REFERENCE DRAWINGS

BIG ROCK SITE PLAN 526-418-740
EXISTING SITE CONDITIONS AND DEMOLITION PLAN, SHEET 2 OF 2 526-418-742

40 0 40 80 120
SCALE OF FEET

ALWAYS THINK SAFETY

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

WEBER BASIN PROJECT

UTAH

EAST CANYON STATE PARK

RECREATION REHABILITATION - PHASE III

BIG ROCK EXISTING SITE CONDITIONS AND DEMOLITION PLAN

DESIGNED /S/ Jay Bytheway, P.E. CHECKED /S/ Bart Leeflang
DRAWN /S/ Jay Bytheway, P.E. TECH. APPR. /S/ Jay Bytheway, P.E.
JAY BYTHEWAY, P.E.
APPROVED /S/ Scott Rich, P.E.
SCOTT RICH, P.E. - PEER REVIEWER

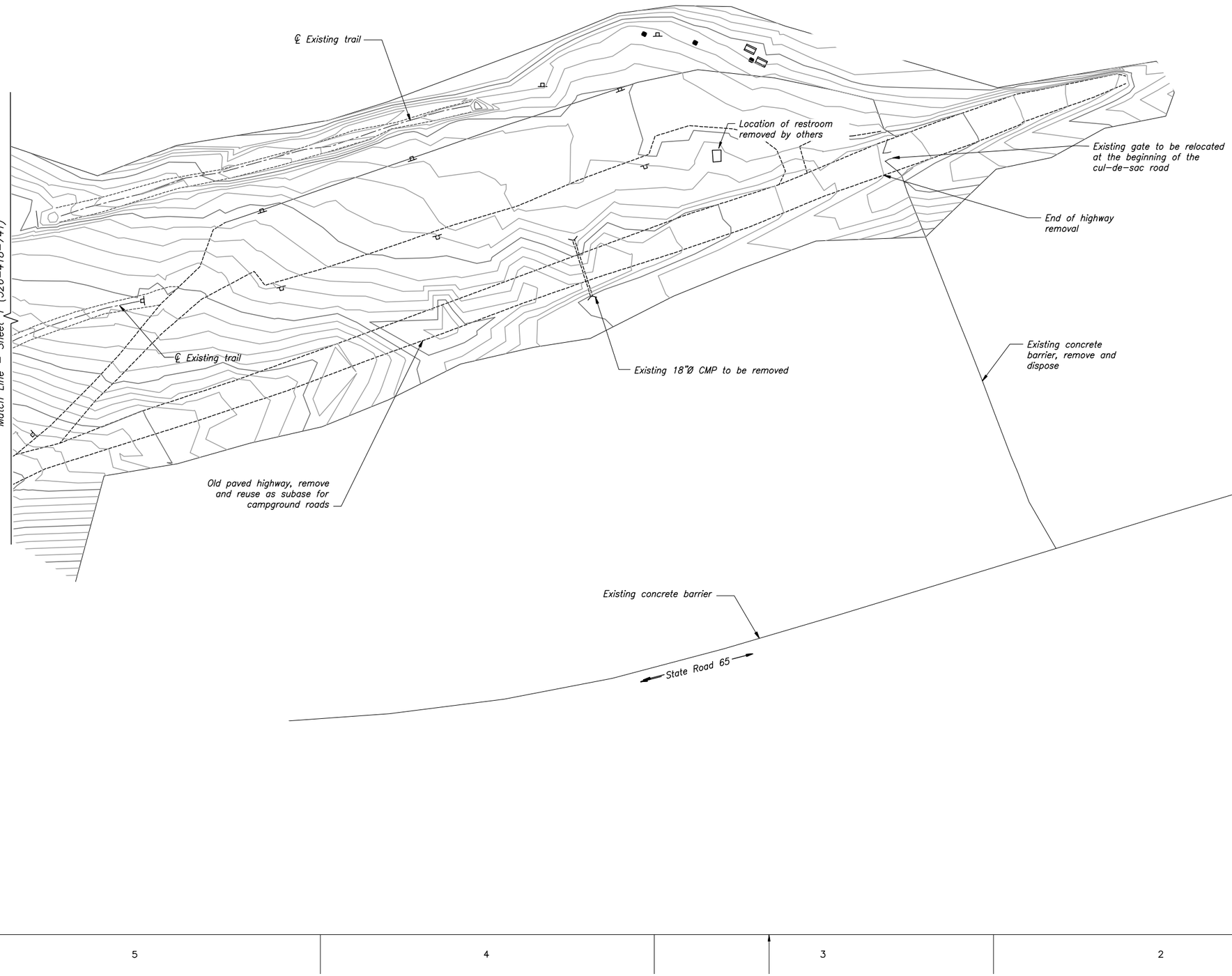
PROVO, UTAH SHEET 1 OF 2 2008-5-22 526-418-741

CAD SYSTEM: AUTOCAD Rel. 17.15 (LMS TECH)
CAD FILENAME: L:\ECANYON\Phase III\Final\526-418-740-53 770-75 Scaling

DATE AND TIME PLOTTED 29-Aug-08 9:22 AM
PLOTTED BY JBYTHEWAY

526-418-742

EAST CANYON RESERVOIR



N

NOTE

1. For Notes and Explanation, see Sheet 1 (Dwg. 526-418-741).

REFERENCE DRAWINGS

BIG ROCK SITE PLAN 526-418-740
EXISTING SITE CONDITIONS AND DEMOLITION PLAN, SHEET 1 OF 2 526-418-741

40 0 40 80 120
SCALE OF FEET

ALWAYS THINK SAFETY

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK
RECREATION REHABILITATION - PHASE III
BIG ROCK - EXISTING SITE CONDITIONS AND DEMOLITION PLAN

DESIGNED /S/ Jay Bytheway, P.E. CHECKED /S/ Bart Leeflang
DRAWN /S/ Jay Bytheway, P.E. TECH. APPR. /S/ Jay Bytheway, P.E. JAY BYTHEWAY, P.E.
APPROVED /S/ Scott Rich, P.E. SCOTT RICH, P.E. - PEER REVIEWER

PROVO, UTAH SHEET 2 OF 2 2008-5-22 526-418-742

DATE AND TIME PLOTTED
26-Aug-08 4:01 PM
EDITED BY
JBYTHEWAY

CAD SYSTEM
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CAD FILENAME
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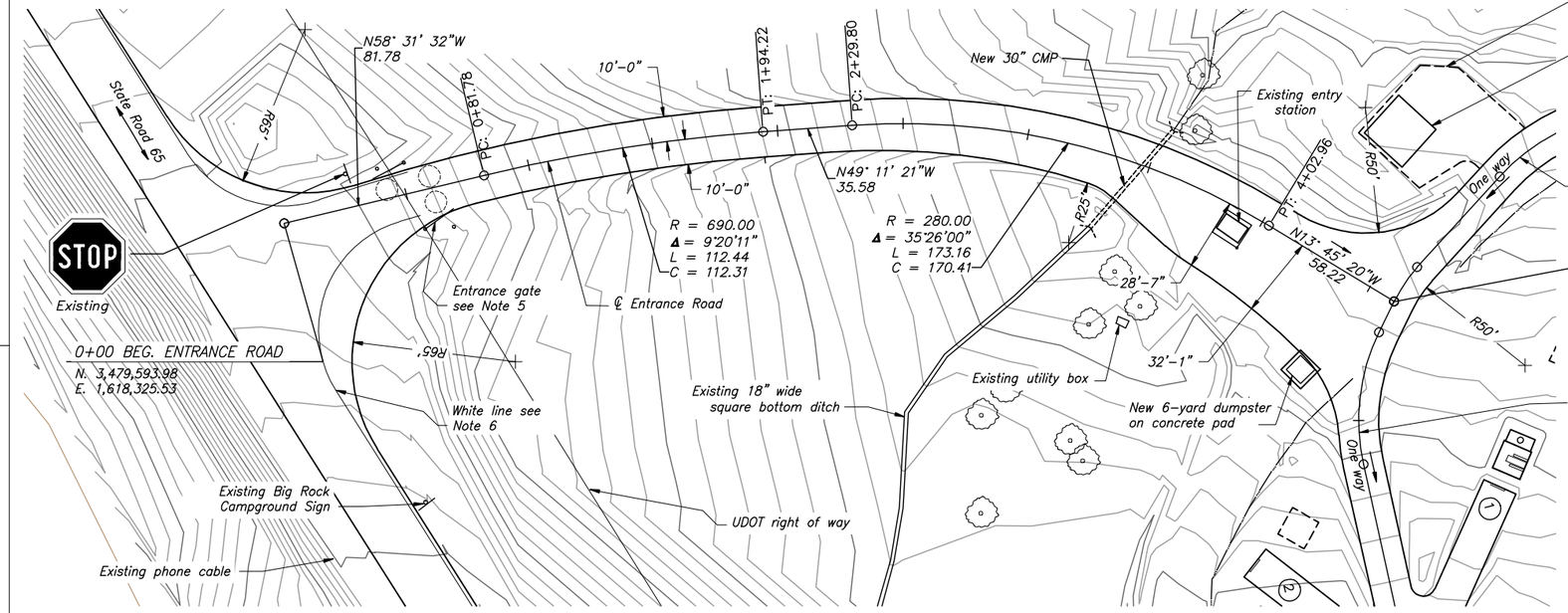
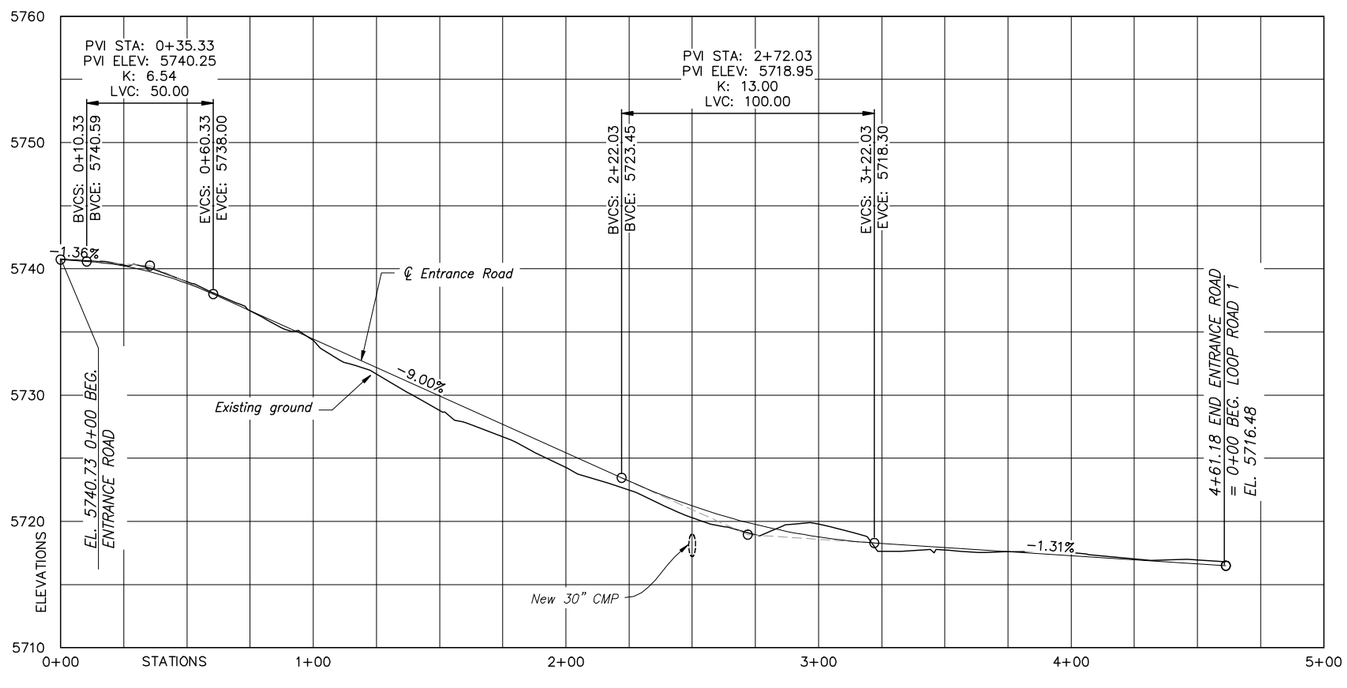
526-418-743



PLAN



PROFILE

LEGEND

- Drainage
- Existing tree or bush
- Tent campsite
- Shelter pad with table and firering

NOTES

1. Contour interval is 1 foot.
2. Contours shown are finish grade.
3. Camp site numbers are for reference only.
4. Stationing and distances are in grid. Multiply distances and stationing by 1.00029274 to obtain ground distances.
5. Use existing entrance gate and modify to open automaticaly in the direction of traffic as shown. Equip gates with solar powered operators.
6. Match into existing highway white lines with 45 foot radius painted lines.

REFERENCE DRAWINGS

BIG ROCK SITE PLAN 526-418-740
BIG ROCK LOOP ROAD 1- PLAN AND PROFILE .
STA. 0+00 TO STA. 6+00.....526-418-744
BIG ROCK LOOP ROAD 1-PLAN AND PROFILE
STA. 6+00 TO STA. 7+93.52.....526-418-745
BIG ROCK LOOP ROAD 2-PLAN AND PROFILE
STA. 0+00 TO STA. 5+50..... 526-418-746
BIG ROCK LOOP ROAD 2-PLAN AND PROFILE
STA. 5+50 TO STA. 9+95.11..... 526-418-747
BIG ROCK CUL-DE-SAC ROAD-PLAN AND PROFILE
STA. 0+00 TO STA. 5+46.72.....526-418-748

30 0 30 60 90
HORIZONTAL SCALE OF FEET
3 0 3 6 9
VERTICAL SCALE OF FEET

ALWAYS THINK SAFETY

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK
RECREATION REHABILITATION - PHASE III
BIG ROCK ENTRANCE ROAD
PLAN AND PROFILE

DESIGNED /S/ Jay Bytheway, P.E. CHECKED /S/ Bart Leeflang
DRAWN /S/ Jay Bytheway, P.E. TECH. APPR. /S/ Jay Bytheway, P.E.
JAY BYTHEWAY, P.E.
APPROVED /S/ Scott Rich, P.E.
SCOTT RICH, P.E. - PEER REVIEWER

PROVO, UTAH 2008-5-22 526-418-743

DATE AND TIME PLOTTED
26-Aug-08 4:01 PM
PLOTTED BY
JBYTHEWAY

CAD SYSTEM
AUTOCAD Rel. 17.1S (LMS TECH)
CAD FILENAME
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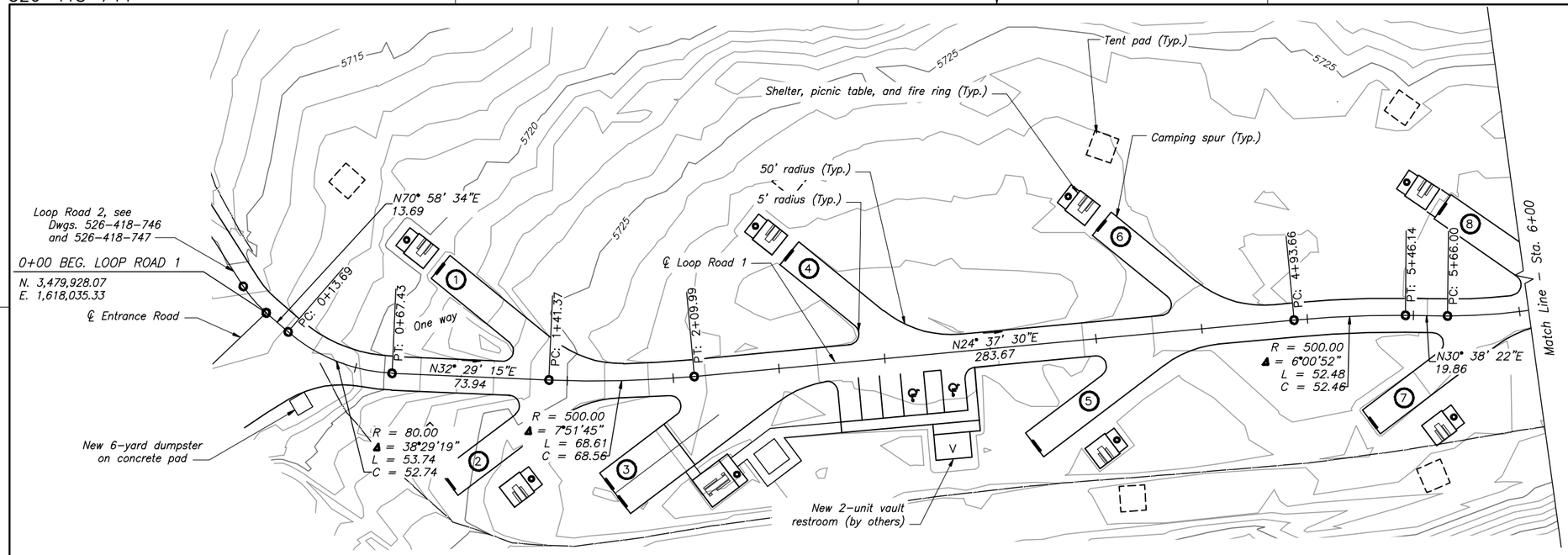

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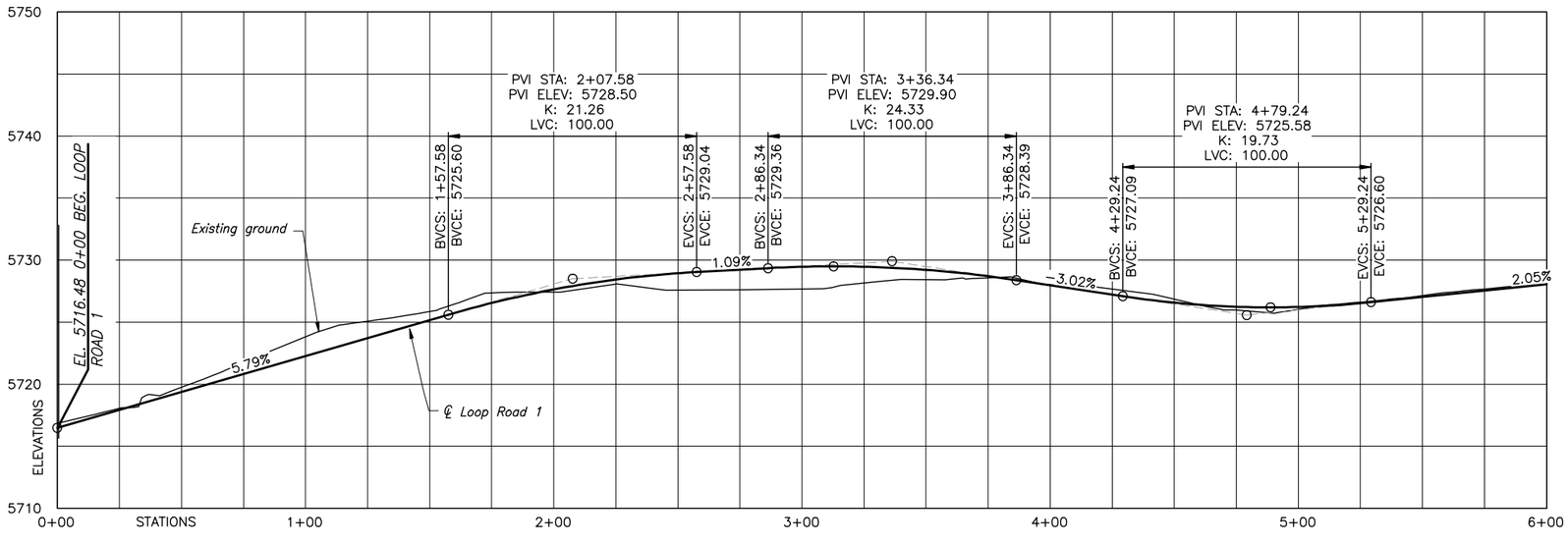

PROFILE

NOTES

1. Contour interval is 1 foot.
2. Contours shown are finish grade.
3. Camp site numbers are for reference only.
4. Stationing and distances are in grid. Multiply distances and stationing by 1.00029274 to obtain ground distances.
5. For Typical Accessible Parking Detail see Dwg. 526-418-776.

REFERENCE DRAWINGS

BIG ROCK SITE PLAN 526-418-740
BIG ROCK ENTRANCE ROAD
PLAN AND PROFILE 526-418-743
BIG ROCK LOOP ROAD 1-PLAN AND PROFILE
STA. 6+00 TO STA. 7+93.52.....526-418-745
BIG ROCK LOOP ROAD 2-PLAN AND PROFILE
STA. 0+00 TO STA. 5+50..... 526-418-746
BIG ROCK LOOP ROAD 2-PLAN AND PROFILE
STA. 5+50 TO STA. 9+95.11..... 526-418-747
BIG ROCK CUL-DE-SAC ROAD-PLAN AND PROFILE
STA. 0+00 TO STA. 5+46.72.....526-418-748
BIG ROCK CAMPGROUND, FINISH GRADING POINTS
CAMPSITE NOS. 1-14.....526-418-750
BIG ROCK CAMPGROUND, FINISH GRADING POINTS
CAMPSITE NOS. 24-35.....526-418-751
BIG ROCK CAMPGROUND, FINISH GRADING POINTS
CAMPSITE NOS. 15-23.....526-418-752
TYPICAL PAVEMENT AND SIDEWALK DETAILS.....526-418-776

30 0 30 60 90
HORIZONTAL SCALE OF FEET
3 0 3 6 9
VERTICAL SCALE OF FEET

REV NO		
1	2008-09-24 400 E. MANSEAU	ADDED REFERENCE TO DWG. 526-418-776 FOR TYPICAL ACCESSIBLE PARKING AND SINAGE DETAIL.

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK
RECREATION REHABILITATION – PHASE III

BIG ROCK LOOP ROAD 1
PLAN AND PROFILE – STA. 0+00 TO STA. 6+00

DESIGNED /S/ Jay Bytheway, P.E. CHECKED /S/ Bart Leeflang
DRAWN /S/ Jay Bytheway, P.E. TECH. APPR. /S/ Jay Bytheway, P.E. JAY BYTHEWAY, P.E.
APPROVED /S/ Scott Rich, P.E. SCOTT RICH, P.E. – PEER REVIEWER

PROVO, UTAH 2008-5-22 526-418-744

DATE AND TIME PLOTTED 16-Oct-08 7:15 AM PLOTTED BY EMANSEAU

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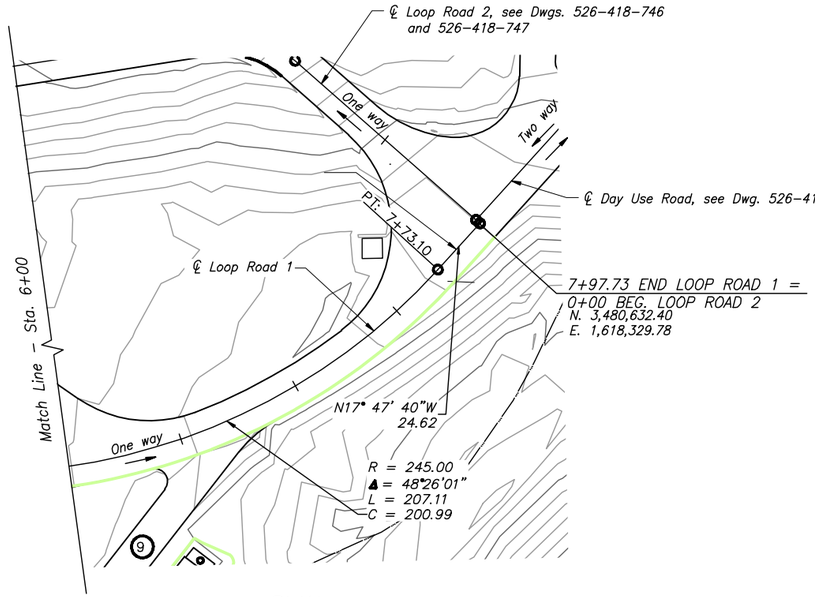

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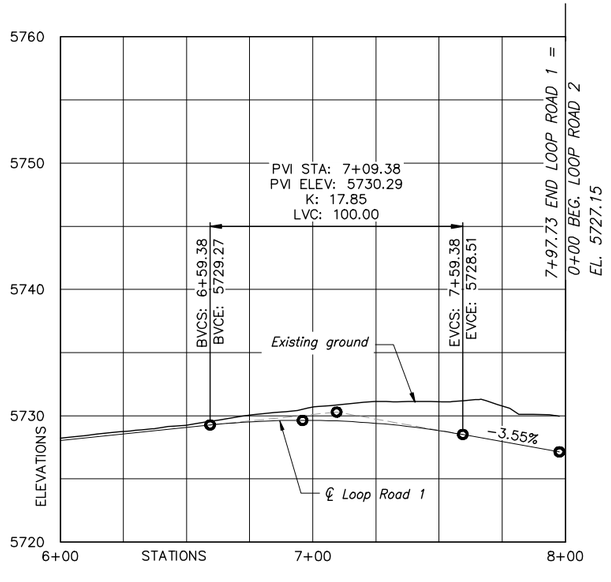

PROFILE

NOTES

1. Contour interval is 1 foot.
2. Contours shown are finish grade.
3. Camp site numbers are for reference only.
4. Stationing and distances are in grid. Multiply distances and stationing by 1.00029274 to obtain ground distances.

REFERENCE DRAWINGS

BIG ROCK SITE PLAN 526-418-740
BIG ROCK LOOP ROAD 1- PLAN AND PROFILE .
STA. 0+00 TO STA. 6+00.....526-418-744
BIG ROCK LOOP ROAD 2-PLAN AND PROFILE
STA. 0+00 TO STA. 5+50..... 526-418-746
BIG ROCK LOOP ROAD 2-PLAN AND PROFILE
STA. 5+50 TO STA. 9+95.11..... 526-418-747
BIG ROCK CUL-DE-SAC ROAD-PLAN AND PROFILE
STA. 0+00 TO STA. 5+46.72.....526-418-748
BIG ROCK ACCESSIBLE WALKWAYS 1 AND 2
PLAN AND PROFILE.....526-418-749
BIG ROCK CAMPGROUND, FINISH GRADING POINTS
CAMPSITE NOS. 1-14.....526-418-750
BIG ROCK CAMPGROUND, FINISH GRADING POINTS
CAMPSITE NOS. 24-35.....526-418-751
BIG ROCK CAMPGROUND, FINISH GRADING POINTS
CAMPSITE NOS. 15-23.....526-418-752

30 0 30 60 90
HORIZONTAL SCALE OF FEET

3 0 3 6 9
VERTICAL SCALE OF FEET

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK

RECREATION REHABILITATION - PHASE III

BIG ROCK LOOP ROAD 1
PLAN AND PROFILE - STA. 6+00 TO END STA. 7+97.73

DESIGNED /S/ Jay Bytheway, P.E. CHECKED /S/ Bart Leeflang
DRAWN /S/ Jay Bytheway, P.E. TECH. APPR. /S/ Jay Bytheway, P.E. JAY BYTHEWAY, P.E.
APPROVED /S/ Scott Rich, P.E. SCOTT RICH, P.E. - PEER REVIEWER

PROVO, UTAH 2008-5-22 526-418-745

DATE AND TIME PLOTTED 29-Aug-08 9:22 AM PLOTTED BY JBYTHEWAY

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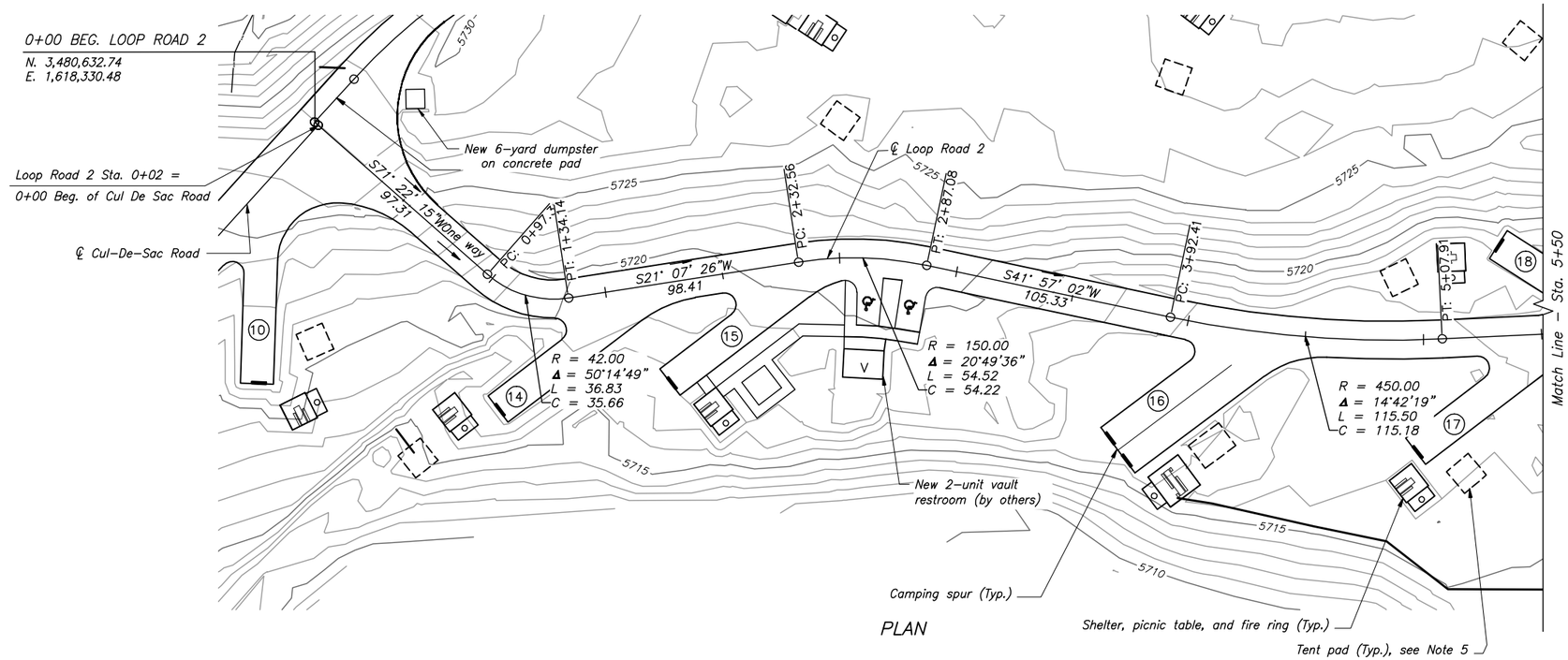

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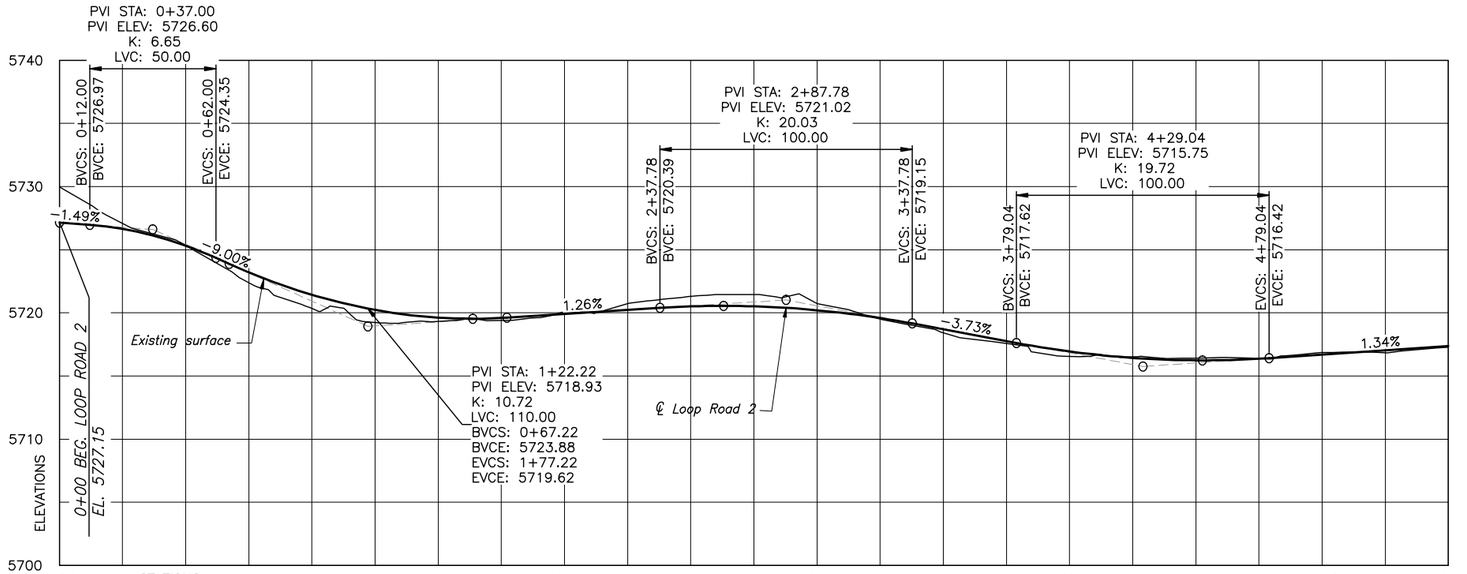

PROFILE

NOTES

1. Contour interval is 1 foot.
2. Contours shown are finish grade.
3. Camp site numbers are for reference only.
4. Stationing and distances are in grid. Multiply distances and stationing by 1.00029274 to obtain ground distances.
5. Tent pads shall be placed on old highway road bed, where possible.
6. For Typical Accessible Parking Detail see Dwg. 526-418-776.

REFERENCE DRAWINGS

BIG ROCK SITE PLAN 526-418-740
BIG ROCK LOOP ROAD 1- PLAN AND PROFILE .
STA. 0+00 TO STA. 6+00.....526-418-744
BIG ROCK LOOP ROAD 2-PLAN AND PROFILE
STA. 6+00 TO STA. 7+93.52.....526-418-745
BIG ROCK LOOP ROAD 2-PLAN AND PROFILE
STA. 5+50 TO STA. 9+95.11..... 526-418-747
BIG ROCK CUL-DE-SAC ROAD-PLAN AND PROFILE
STA. 0+00 TO STA. 5+46.72.....526-418-748
BIG ROCK ACCESSIBLE WALKWAYS 1 AND 2
PLAN AND PROFILE.....526-418-749
BIG ROCK CAMPGROUND, FINISH GRADING POINTS
CAMPSITE NOS. 1-14.....526-418-750
BIG ROCK CAMPGROUND, FINISH GRADING POINTS
CAMPSITE NOS. 24-35.....526-418-751
BIG ROCK CAMPGROUND, FINISH GRADING POINTS
CAMPSITE NOS. 15-23.....526-418-752
TYPICAL PAVEMENT AND SIDEWALK DETAILS..... 526-418-776

30 0 30 60 90
HORIZONTAL SCALE OF FEET
3 0 3 6 9
VERTICAL SCALE OF FEET

REV NO		
1	2008-09-24 400 E. MANSEAU	ADDED REFERENCE TO DWG. 526-418-776 FOR TYPICAL ACCESSIBLE PARKING AND SINAGE DETAIL.

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK
RECREATION REHABILITATION - PHASE III

BIG ROCK LOOP ROAD 2
PLAN AND PROFILE - STA. 0+00 TO STA. 5+50

DESIGNED _/S/ Jay Bytheway, P.E._ CHECKED_ _/S/ Bart Leeflang_
DRAWN _/S/ Jay Bytheway, P.E._ TECH. APPR. _/S/ Jay Bytheway, P.E._ JAY BYTHEWAY, P.E.
APPROVED _/S/ Scott Rich, P.E._ SCOTT RICH, P.E. - PEER REVIEWER

PROVO, UTAH SHEET 1 OF 2 2008-5-22 | 526-418-746

DATE AND TIME PLOTTED
16-Oct-08 7:15 AM
PLOTTED BY
E.MANSEAU

CAD SYSTEM
AUTOCAD Rel. 17.15 (LMS TECH)
CAD FILENAME
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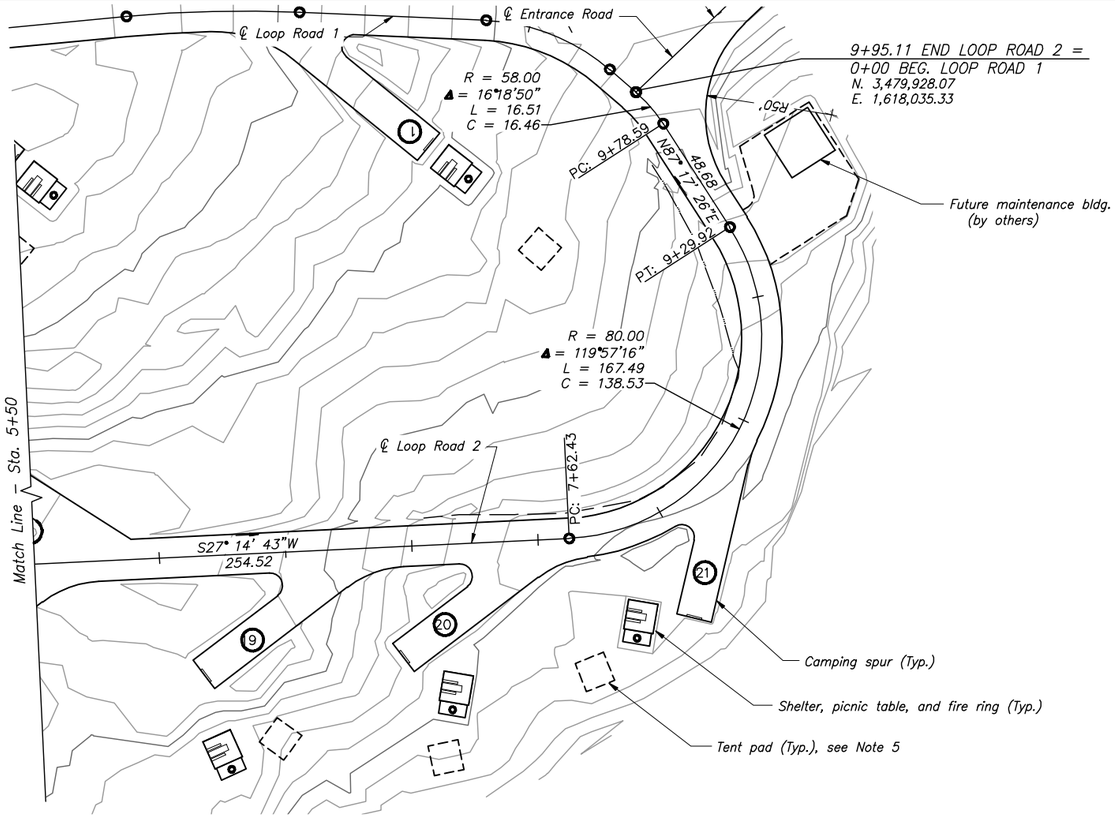
11-20-2008\526-418-740.sht 27th-25 Vaulting



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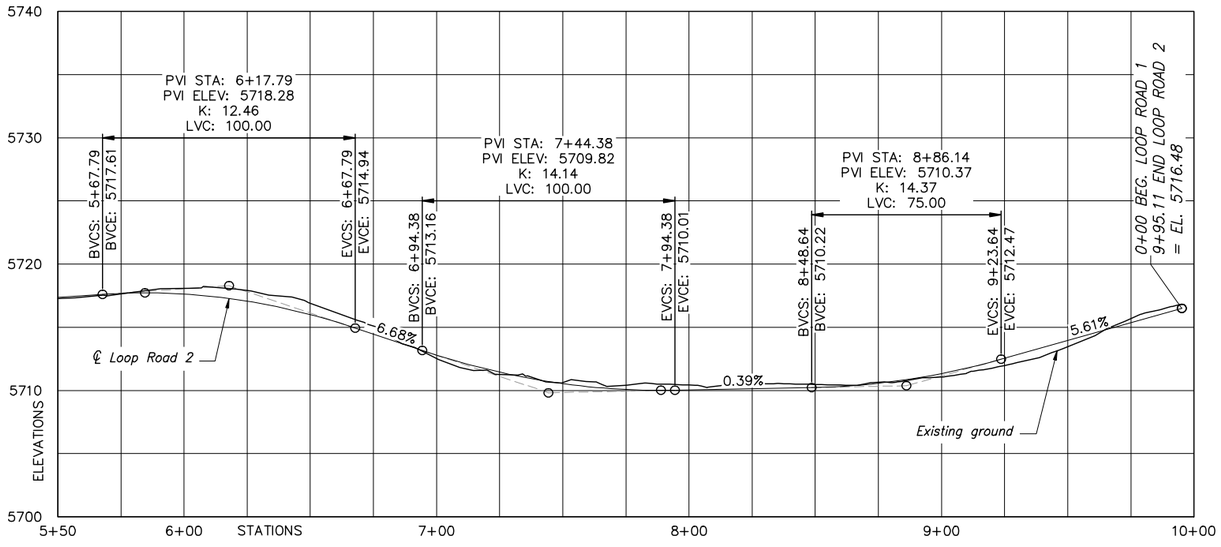

PROFILE

NOTES

1. Contour interval is 1 foot.
2. Contours shown are finish grade.
3. Camp site numbers are for reference only.
4. Stationing and distances are in grid. Multiply distances and stationing by 1.00029274 to obtain ground distances.
5. Tent pads shall be placed on old highway road bed where possible.

REFERENCE DRAWINGS

BIG ROCK SITE PLAN 526-418-740
BIG ROCK LOOP ROAD 1- PLAN AND PROFILE .
STA. 0+00 TO STA. 6+00.....526-418-744
BIG ROCK LOOP ROAD 1-PLAN AND PROFILE
STA. 6+00 TO STA. 7+93.52.....526-418-745
BIG ROCK LOOP ROAD 2-PLAN AND PROFILE
STA. 0+00 TO STA. 5+50..... 526-418-746
BIG ROCK CUL-DE-SAC ROAD-PLAN AND PROFILE
STA. 0+00 TO STA. 5+46.72.....526-418-748
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PLAN AND PROFILE.....526-418-749
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BIG ROCK CAMPGROUND, FINISH GRADING POINTS
CAMPSITE NOS. 24-35.....526-418-751
BIG ROCK CAMPGROUND, FINISH GRADING POINTS
CAMPSITE NOS. 15-23.....526-418-752

30 0 30 60 90
HORIZONTAL SCALE OF FEET

3 0 3 6 9
VERTICAL SCALE OF FEET

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK

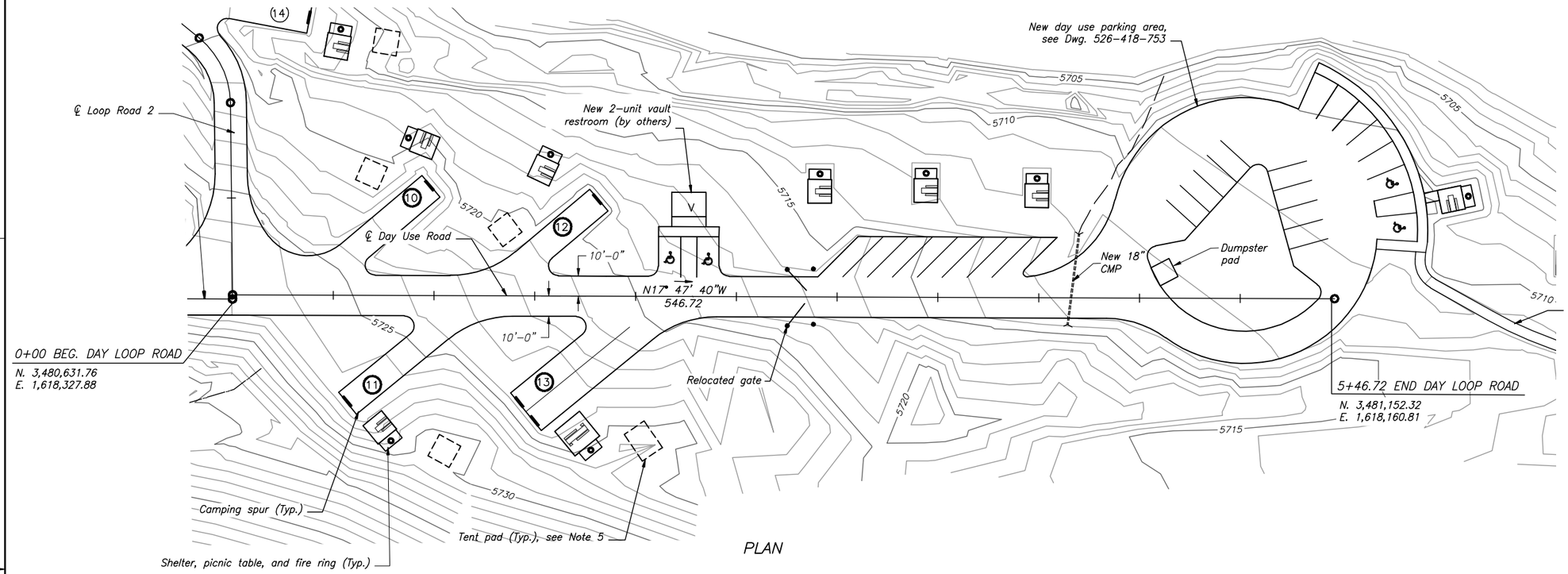
RECREATION REHABILITATION – PHASE III
BIG ROCK LOOP ROAD 2
PLAN AND PROFILE – STA. 5+50 TO END STA. 9+95.11

DESIGNED /S/ Jay Bytheway, P.E. CHECKED /S/ Bart Leeflang
DRAWN /S/ Jay Bytheway, P.E. TECH. APPR. /S/ Jay Bytheway, P.E. JAY BYTHEWAY, P.E.
APPROVED /S/ Scott Rich, P.E. SCOTT RICH, P.E. – PEER REVIEWER

PROVO, UTAH SHEET 2 OF 2 2008-5-22 526-418-747

DATE AND TIME PLOTTED 29-Aug-08 9:22 AM PLOTTED BY JBYTHEWAY

CAD SYSTEM AUTOCAD Rel. 17.1S (LMS TECH) CAD FILENAME I:\ECANYON\Phase III\Final\526-418-740-53 770-75 v5a.dwg



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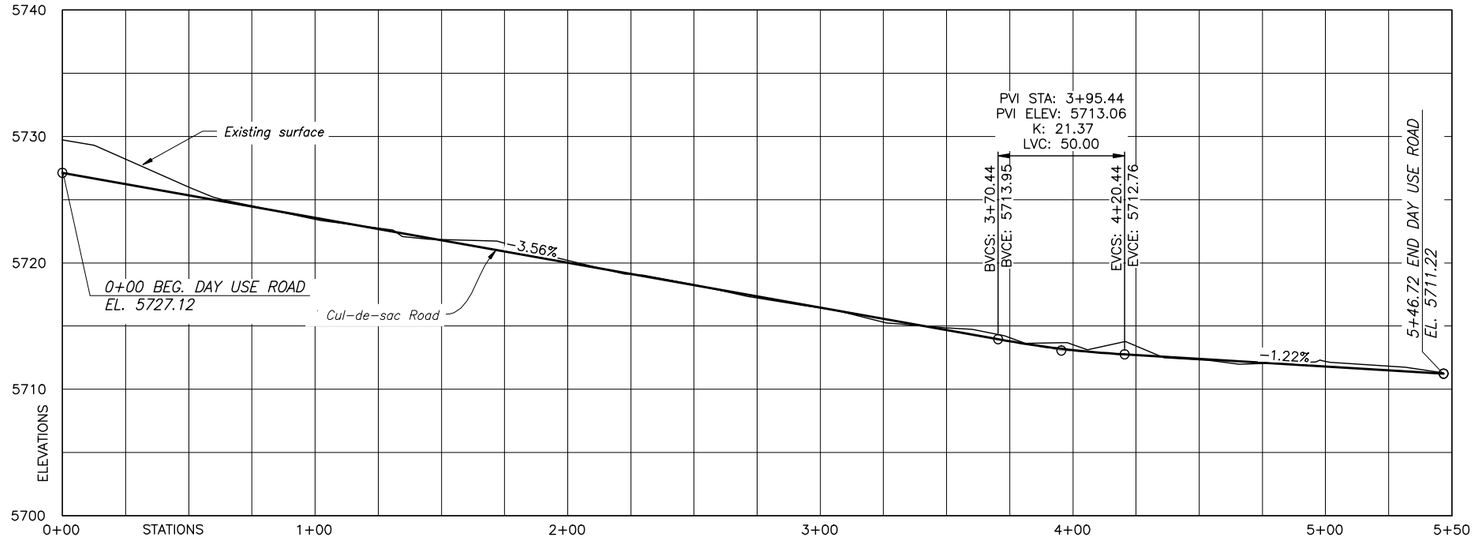

PROFILE

NOTES

1. Contour interval is 1 foot.
2. Contours shown are finish grade.
3. Camp site numbers are for reference only.
4. Stationing and distances are in grid. Multiply distances and stationing by 1.00029274 to obtain ground distances.
5. Tent pads shall be placed on old gravel road bed where possible.
6. For Typical Accessible Parking Detail see Dwg. 526-418-776.

REFERENCE DRAWINGS

BIG ROCK SITE PLAN 526-418-740
BIG ROCK LOOP ROAD 1- PLAN AND PROFILE .
STA. 0+00 TO STA. 6+00.....526-418-744
BIG ROCK LOOP ROAD 2-PLAN AND PROFILE
STA. 0+00 TO STA. 5+50..... 526-418-746
BIG ROCK LOOP ROAD 2-PLAN AND PROFILE
STA. 5+50 TO STA. 9+95.11..... 526-418-747
BIG ROCK ACCESSIBLE WALKWAYS 1 AND 2
PLAN AND PROFILE.....526-418-749
BIG ROCK CAMPGROUND, FINISH GRADING POINTS
CAMPSITE NOS. 1-14.....526-418-750
BIG ROCK CAMPGROUND, FINISH GRADING POINTS
CAMPSITE NOS. 24-35.....526-418-751
BIG ROCK CAMPGROUND, FINISH GRADING POINTS
CAMPSITE NOS. 15-23.....526-418-752
BIG ROCK CAMPGROUND
DAY USE PARKING PLAN.....526-418-753
TYPICAL PAVEMENT AND SIDEWALK DETAILS.....526-418-776

30 0 30 60 90
HORIZONTAL SCALE OF FEET

3 0 3 6 9
VERTICAL SCALE OF FEET

REV NO		
1	2008-09-24 400 E. MANSEAU	ADDED REFERENCE TO DWG. 526-418-776 FOR TYPICAL ACCESSIBLE PARKING AND SINAGE DETAIL.

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK
RECREATION REHABILITATION - PHASE III

BIG ROCK CUL-DE-SAC ROAD
PLAN AND PROFILE - STA. 0+00 TO END STA. 5+46.72

DESIGNED /S/ Jay Bytheway, P.E. CHECKED /S/ Bart Leeflang
DRAWN /S/ Jay Bytheway, P.E. TECH. APPR. /S/ Jay Bytheway, P.E. JAY BYTHEWAY, P.E.
APPROVED /S/ Scott Rich, P.E. SCOTT RICH, P.E. - PEER REVIEWER

PROVO, UTAH 2008-5-22 526-418-748

DATE AND TIME PLOTTED 16-Oct-08 7:15 AM
PLOTTED BY EMANSEAU

CAD SYSTEM AUTOCAD Rel. 17.1S (LMS TECH)
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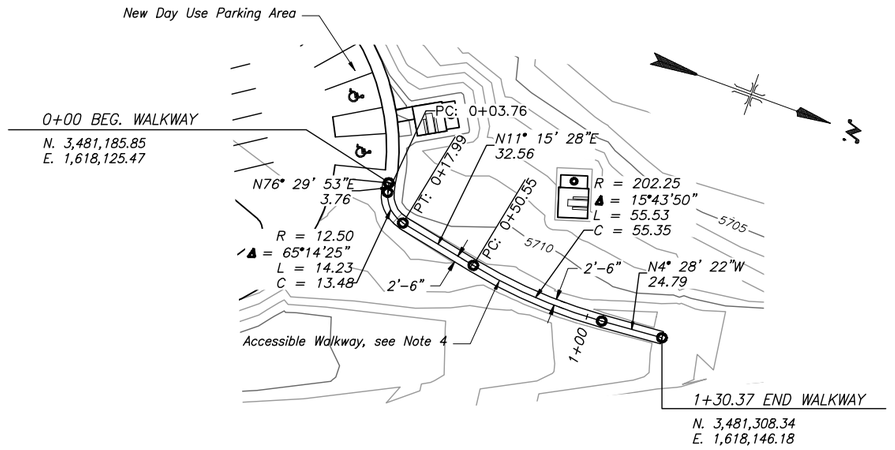
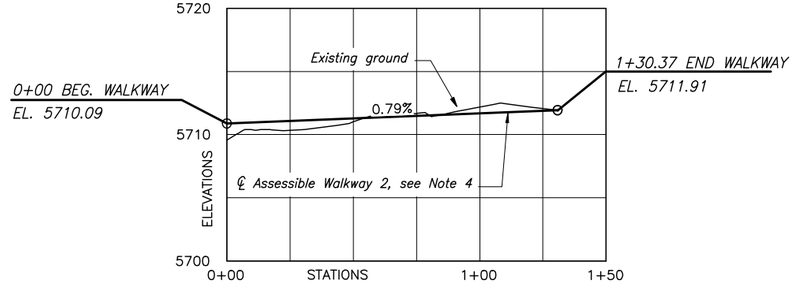


PLAN – ACCESSIBLE WALKWAY



PROFILE – ACCESSIBLE WALKWAY

NOTES

1. Contour interval is 1 foot.
2. Contours shown are finish grade.
3. Camp site numbers are for reference only.
4. Accessible walkways should conform to ADA (Americans with Disabilities Act) guidelines.
5. Stationing and distances are in grid. Multiply distances and stationing by 1.00029274 to obtain ground distances.
6. For Typical Accessible Parking Detail see Dwg. 526-418-776.

REFERENCE DRAWINGS

BIG ROCK SITE PLAN 526-418-740
BIG ROCK LOOP ROAD 2-PLAN AND PROFILE
STA. 0+00 TO STA. 5+50..... 526-418-746
BIG ROCK CUL DE SAC ROAD-PLAN AND PROFILE
STA. 0+00 TO STA. 5+46.72..... 526-418-748
BIG ROCK CAMPGROUND
DAY USE PARKING 526-418-753
TYPICAL PAVEMENT AND SIDEWALK DETAILS.... 526-418-776

30 0 30 60 90
HORIZONTAL SCALE OF FEET

3 0 3 6 9
VERTICAL SCALE OF FEET

REV NO	2008-09-24	ADDED REFERENCE TO DWG. 526-418-776 FOR
1	400 E. MANSEAU	TYPICAL ACCESSIBLE PARKING AND SINAGE DETAIL.

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK
RECREATION REHABILITATION – PHASE III

BIG ROCK ACCESSIBLE WALKWAY
PLAN AND PROFILE

DESIGNED /S/ Jay Bytheway, P.E. CHECKED /S/ Bart Leeflang
DRAWN /S/ Jay Bytheway, P.E. TECH. APPR. /S/ Jay Bytheway, P.E. JAY BYTHEWAY, P.E.
APPROVED /S/ Scott Rich, P.E. SCOTT RICH, P.E. – PEER REVIEWER

PROVO, UTAH 2008-5-22 526-418-749

DATE AND TIME PLOTTED 16-Oct-08 7:15 AM PLOTTED BY EMANSEAU

CAD SYSTEM AUTOCAD Rel. 17.1S (LMS TECH)
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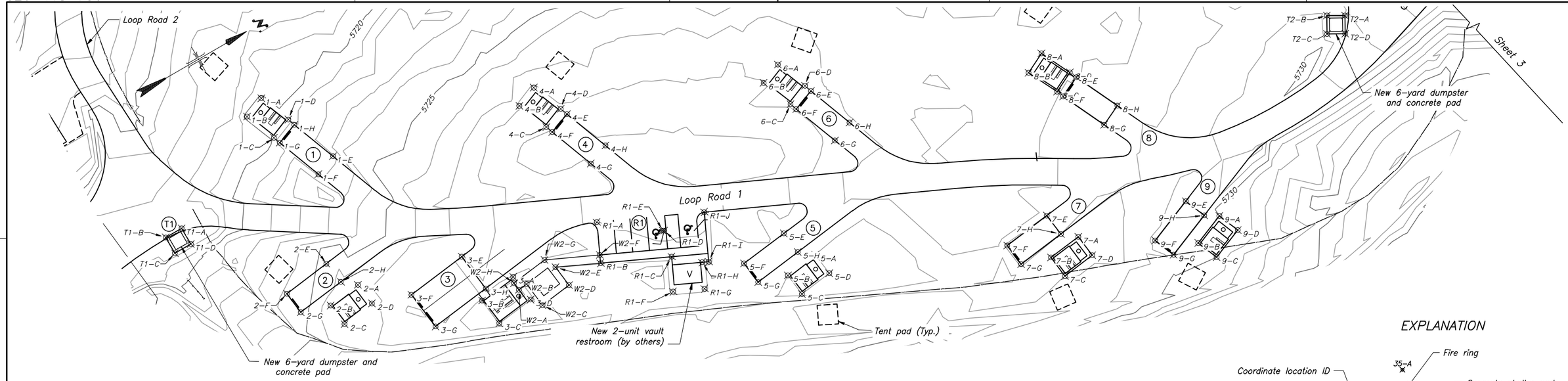
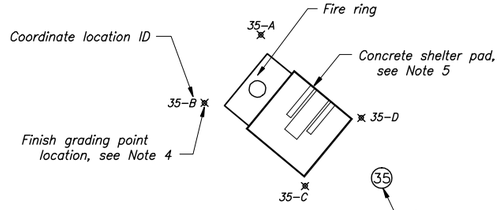


CONTROL POINTS				
Point #	Description	Northing	Easting	Elevation
12000	T1-A	3479926.41	1618075.20	5717.30
12001	T1-B	3479915.41	1618075.22	5717.30
12002	T1-C	3479915.43	1618086.22	5717.52
12003	T1-D	3479926.43	1618086.20	5717.52
12004	1-A	3480007.22	1618031.43	5720.60
12005	1-B	3479994.23	1618036.65	5720.60
12006	1-C	3480001.94	1618055.83	5720.60
12007	1-D	3480014.93	1618050.61	5720.60
12008	1-E	3480027.20	1618083.25	5721.80
12009	1-F	3480014.12	1618088.23	5721.80
12010	1-G	3480003.45	1618060.19	5721.50
12011	1-H	3480016.53	1618055.21	5721.50
12012	2-A	3480001.43	1618157.88	5726.70
12013	2-B	3479980.91	1618160.45	5726.70
12014	2-C	3479982.65	1618174.34	5726.70
12015	2-D	3480003.17	1618171.77	5726.70
12016	2-E	3479991.42	1618137.32	5725.80
12017	2-F	3479961.65	1618141.04	5725.50
12018	2-G	3479963.39	1618154.93	5725.50
12019	2-H	3479993.50	1618151.17	5725.81
12020	3-A	3480085.01	1618200.52	5727.95
12021	3-B	3480061.57	1618203.46	5727.95
12022	3-C	3480063.73	1618220.57	5727.95
12023	3-D	3480087.17	1618217.64	5727.95
12024	3-E	3480064.18	1618174.50	5728.05
12025	3-F	3480026.48	1618179.22	5727.67
12026	3-G	3480029.45	1618203.03	5727.67
12027	3-H	3480067.16	1618198.32	5728.05
12028	4-A	3480152.70	1618107.98	5728.60
12029	4-B	3480139.71	1618113.21	5728.60
12030	4-C	3480147.42	1618132.39	5728.60
12031	4-D	3480160.41	1618127.17	5728.60
12032	4-E	3480162.01	1618131.77	5729.00

CONTROL POINTS				
Point #	Description	Northing	Easting	Elevation
12033	4-F	3480148.93	1618136.75	5729.00
12034	4-G	3480159.59	1618164.79	5729.30
12035	4-H	3480172.68	1618159.81	5729.30
12036	5-A	3480249.35	1618280.04	5726.10
12037	5-B	3480228.84	1618282.61	5726.10
12038	5-C	3480230.58	1618296.50	5726.10
12039	5-D	3480251.09	1618293.93	5726.10
12040	5-E	3480239.37	1618259.47	5728.00
12041	5-F	3480209.58	1618263.20	5727.70
12042	5-G	3480211.31	1618277.09	5727.70
12043	5-H	3480241.07	1618273.37	5728.00
12052	6-A	3480287.12	1618169.60	5727.89
12053	6-B	3480274.13	1618174.82	5727.89
12054	6-C	3480281.84	1618194.01	5727.89
12055	6-D	3480294.83	1618188.79	5727.89
12056	6-E	3480296.44	1618193.39	5727.69
12057	6-F	3480283.35	1618198.36	5727.69
12058	6-G	3480294.02	1618226.40	5727.99
12059	6-H	3480307.11	1618221.42	5727.99
12068	7-A	3480392.11	1618349.98	5727.70
12069	7-B	3480371.59	1618352.55	5727.70
12070	7-C	3480373.33	1618366.44	5727.70
12071	7-D	3480393.85	1618363.87	5727.70
12072	7-E	3480382.09	1618329.41	5728.00
12073	7-F	3480352.33	1618333.14	5728.30
12074	7-G	3480354.07	1618347.03	5728.30
12075	7-H	3480383.83	1618343.30	5728.00
12076	8-A	3480428.09	1618243.21	5727.00
12077	8-B	3480415.55	1618249.42	5727.00
12078	8-C	3480424.72	1618267.95	5727.00
12079	8-D	3480437.27	1618261.74	5727.00
12080	8-E	3480439.23	1618266.20	5727.20
12081	8-F	3480426.57	1618272.17	5727.20

CONTROL POINTS				
Point #	Description	Northing	Easting	Elevation
12082	8-G	3480439.38	1618299.30	5727.50
12083	8-H	3480452.04	1618293.32	5727.50
12092	9-A	3480472.10	1618381.60	5730.00
12093	9-B	3480452.94	1618389.36	5730.00
12094	9-C	3480458.19	1618402.34	5730.00
12095	9-D	3480477.36	1618394.58	5730.00
12096	9-E	3480459.01	1618363.83	5729.50
12097	9-F	3480431.20	1618375.10	5729.80
12098	9-G	3480436.46	1618388.07	5729.80
12099	9-H	3480464.26	1618376.81	5729.50
12276	T2-A	3480598.09	1618314.94	5727.98
12277	T2-B	3480588.54	1618309.53	5728.00
12278	T2-C	3480583.12	1618319.17	5728.20
12279	T2-D	3480592.72	1618324.54	5728.20
12288	R1-A	3480145.12	1618197.25	5729.09
12289	R1-B	3480134.74	1618219.75	5728.17
12290	R1-C	3480173.76	1618237.80	5728.78
12291	R1-D	3480177.80	1618221.91	5728.68
12292	R1-E	3480176.94	1618221.40	5728.68
12293	R1-F	3480164.04	1618256.44	5728.83
12294	R1-G	3480181.29	1618264.42	5728.83
12295	R1-H	3480188.00	1618249.89	5728.83
12296	R1-I	3480191.63	1618251.57	5728.83
12297	R1-J	3480204.23	1618224.35	5729.16
13067	W2-A	3480084.02	1618209.00	5728.05
13068	W2-B	3480089.76	1618208.28	5728.05
13069	W2-C	3480091.75	1618224.16	5728.05
13070	W2-D	3480111.61	1618221.68	5728.05
13071	W2-E	3480109.94	1618208.28	5728.05
13072	W2-F	3480136.82	1618215.20	5728.24
13073	W2-G	3480106.46	1618201.16	5728.05
13074	W2-H	3480083.41	1618204.04	5728.05

EXPLANATION

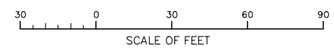


NOTES

1. Contour interval is 1 foot.
2. Contours shown are finish grade.
3. Camp site numbers are for reference only.
4. Finish grading points are offset 9 inches ± out from the concrete shelter pad and fire ring pad.
5. Concrete shelter pads shall protrude 1 to 2 inches above the finish grade.
6. Maximum grading slope shall be 3:1.
7. For site No. 4 extend the firering concrete to the edges of the shelter pad and move the firering to the side.
8. For Typical Accessible Parking Detail see Dwg. 526-418-776.

REFERENCE DRAWINGS

BIG ROCK SITE PLAN 526-418-740
BIG ROCK CAMPGROUND FINISH GRADING POINTS POINTS CAMPSITE NOS. 24-35, CAMPSITE NOS. 24-35..... 526-418-751
BIG ROCK CAMPGROUND FINISH GRADING POINTS CAMPSITE NOS. 15-23..... 526-418-752
TYPICAL PAVEMENT AND SIDEWALK DETAILS... 526-418-776



REV NO		
1	2008-09-24 400 E. MANSEAU	ADDED REFERENCE TO DWG. 526-418-776 FOR TYPICAL ACCESSIBLE PARKING AND SINAGE DETAIL.

ALWAYS THINK SAFETY

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK
RECREATION REHABILITATION - PHASE III
BIG ROCK CAMPGROUND FINISH GRADING POINTS CAMPSITE NOS. 1-14

DESIGNED _ /S/ Jay Bytheway, P.E. _ _ _ CHECKED _ _ /S/ Bart Leeflang _ _ _ _ _ _
DRAWN _ _ /S/ Jay Bytheway, P.E. _ _ _ TECH. APPR. _ _ /S/ Jay Bytheway, P.E. _ _
JAY BYTHEWAY, P.E.
APPROVED _ _ _ /S/ Scott Rich, P.E. _ _ _ _ _ _ _
SCOTT RICH, P.E. - PEER REVIEWER

PROVO, UTAH 2008-5-22 526-418-750

DATE AND TIME PLOTTED
10/6/2008 8:15 AM
PLOTTED BY
EMANSEAU

CAD SYSTEM
AUTOCAD Rel. 17.2S (LMS TECH)
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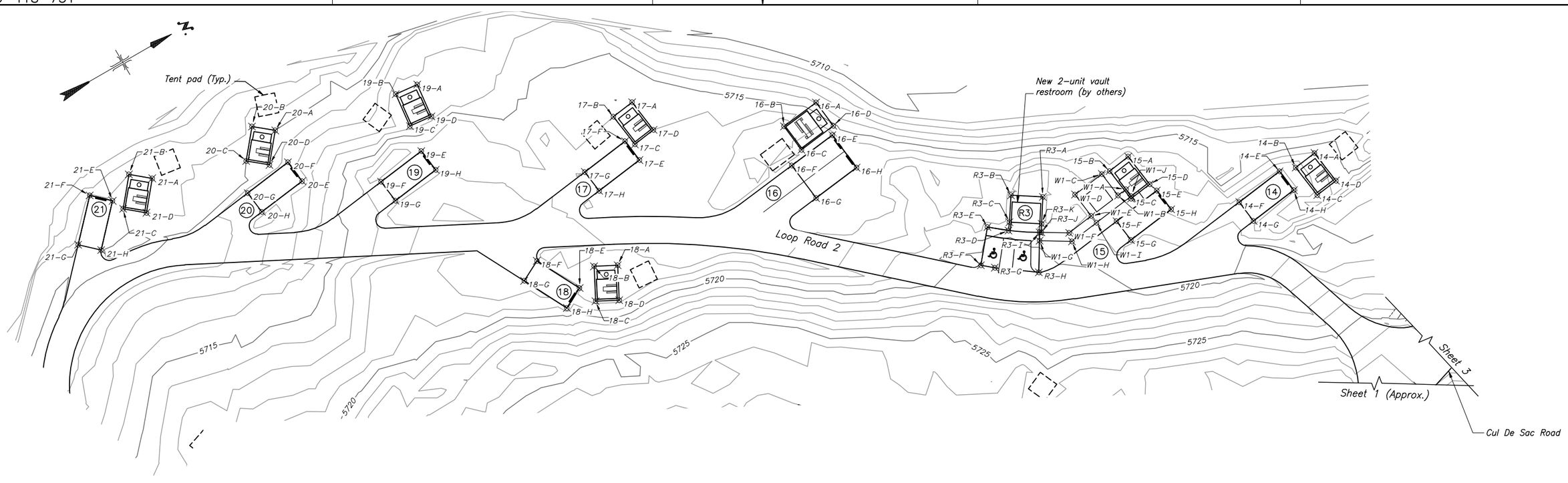

CONTROL POINTS

Point #	Description	Northing	Easting	Elevation
12180	14-A	3480648.40	1618180.08	5717.30
12181	14-B	3480634.53	1618181.98	5717.30
12182	14-C	3480637.33	1618202.46	5717.30
12183	14-D	3480651.20	1618200.57	5717.30
12184	14-E	3480624.98	1618179.13	5718.20
12185	14-F	3480595.23	1618182.97	5718.50
12186	14-G	3480597.02	1618196.85	5718.50
12187	14-H	3480626.77	1618193.02	5718.20
12188	15-A	3480551.73	1618126.78	5718.00
12189	15-B	3480537.86	1618128.68	5718.00
12190	15-C	3480540.66	1618149.16	5718.00
12191	15-D	3480554.53	1618147.27	5718.00
12192	15-E	3480556.38	1618152.62	5718.00
12193	15-F	3480526.63	1618156.45	5718.30
12194	15-G	3480528.42	1618170.34	5718.30
12195	15-H	3480558.17	1618166.50	5718.00
12204	16-A	3480407.49	1618006.46	5715.50
12205	16-B	3480384.03	1618009.24	5715.50
12206	16-C	3480386.05	1618026.37	5715.50
12207	16-D	3480409.51	1618023.59	5715.50
12208	16-E	3480406.20	1618028.09	5716.40
12209	16-F	3480376.42	1618031.65	5716.70
12210	16-G	3480379.26	1618055.48	5716.70
12211	16-H	3480409.05	1618051.92	5716.40
12220	17-A	3480313.17	1617951.86	5716.00
12221	17-B	3480299.30	1617953.76	5716.00
12222	17-C	3480302.10	1617974.24	5716.00
12223	17-D	3480315.97	1617972.35	5716.00
12224	17-E	3480299.77	1617983.63	5716.50
12225	17-F	3480297.98	1617969.75	5716.50

CONTROL POINTS

Point #	Description	Northing	Easting	Elevation
12226	17-G	3480268.23	1617973.58	5716.80
12227	17-H	3480270.02	1617987.47	5716.80
12228	18-A	3480257.46	1618031.19	5717.70
12229	18-B	3480245.04	1618024.73	5717.70
12230	18-C	3480235.49	1618043.08	5717.70
12231	18-D	3480247.91	1618049.54	5717.70
12232	18-E	3480231.21	1618031.54	5718.30
12233	18-F	3480217.32	1618004.95	5718.00
12234	18-G	3480204.91	1618011.44	5718.00
12235	18-H	3480218.80	1618038.03	5718.30
12244	19-A	3480208.13	1617879.05	5713.50
12245	19-B	3480194.21	1617877.62	5713.50
12246	19-C	3480192.09	1617898.19	5713.50
12247	19-D	3480206.01	1617899.62	5713.50
12248	19-E	3480190.50	1617914.40	5716.20
12249	19-F	3480160.75	1617918.24	5716.50
12250	19-G	3480162.54	1617932.12	5716.50
12251	19-H	3480192.29	1617928.29	5716.20
12260	20-A	3480121.68	1617860.55	5710.00
12261	20-B	3480110.89	1617851.63	5710.00
12262	20-C	3480097.72	1617867.56	5710.00
12263	20-D	3480108.51	1617876.48	5710.00
12264	20-E	3480120.49	1617894.51	5711.20
12265	20-F	3480118.70	1617880.62	5711.20
12266	20-G	3480088.95	1617884.46	5711.50
12267	20-H	3480090.74	1617898.34	5711.50
12268	21-A	3480044.32	1617848.62	5709.00
12269	21-B	3480033.53	1617839.70	5709.00
12270	21-C	3480020.35	1617855.64	5709.00
12271	21-D	3480031.14	1617864.56	5709.00

CONTROL POINTS

Point #	Description	Northing	Easting	Elevation
12272	21-E	3480017.36	1617848.45	5709.20
12273	21-F	3480007.15	1617838.87	5709.20
12274	21-G	3479986.62	1617860.74	5709.50
12275	21-H	3479996.82	1617870.32	5709.50
12312	R3-A	3480496.03	1618122.15	5719.97
12313	R3-B	3480480.09	1618111.81	5719.97
12314	R3-C	3480471.41	1618125.20	5719.97
12315	R3-D	3480468.38	1618129.16	5719.92
12316	R3-E	3480458.62	1618121.12	5719.92
12317	R3-F	3480443.88	1618138.77	5720.27
12318	R3-G	3480450.32	1618144.15	5720.30
12319	R3-H	3480471.60	1618159.67	5720.39
12320	R3-I	3480483.89	1618139.33	5719.77
12321	R3-J	3480484.77	1618139.80	5719.77
12322	R3-K	3480487.33	1618135.56	5719.97
13057	W1-A	3480540.95	1618142.94	5718.14
13058	W1-B	3480535.05	1618143.70	5718.14
13059	W1-C	3480533.01	1618127.83	5718.14
13060	W1-D	3480513.15	1618130.39	5718.30
13061	W1-E	3480515.20	1618146.26	5718.40
13062	W1-F	3480498.86	1618148.37	5719.06
13063	W1-G	3480481.30	1618143.60	5719.90
13064	W1-H	3480497.76	1618153.55	5719.13
13065	W1-I	3480515.84	1618151.22	5718.40
13066	W1-J	3480541.63	1618147.90	5718.14

NOTE

1. For Notes and Explanation, see Dwg. 526-418-750.
2. For Typical Accessible Parking Detail see Dwg. 526-418-776.

REFERENCE DRAWINGS

BIG ROCK SITE PLAN 526-418-740
BIG ROCK CAMPGROUND FINISH GRADING POINTS CAMPSITE NOS. 1-14.....526-418-750
BIG ROCK CAMPGROUND FINISH GRADING POINTS CAMPSITE NOS. 15-23..... 526-418-752
TYPICAL PAVEMENT AND SIDEWALK DETAILS... 526-418-776

30 0 30 60 90
SCALE OF FEET

REV NO		
1	2008-09-24 400 E. MANSEAU	ADDED REFERENCE TO DWG. 526-418-776 FOR TYPICAL ACCESSIBLE PARKING AND SINAGE DETAIL.

ALWAYS THINK SAFETY

UNITED STATES
DEPARTMENT OF THE INTERIOR
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WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK
RECREATION REHABILITATION - PHASE III
BIG ROCK CAMPGROUND
FINISH GRADING POINTS CAMPSITE NOS. 24-35

DESIGNED _ /S/ Jay Bytheway, P.E. _ _ _ CHECKED _ _ /S/ Bart Leeflang _ _ _ _ _ _
DRAWN _ _ /S/ Jay Bytheway, P.E. _ _ _ TECH. APPR. _ /S/ Jay Bytheway, P.E. _ _
JAY BYTHEWAY, P.E.
APPROVED _ _ _ /S/ Scott Rich, P.E. _ _ _ _ _ _ _
SCOTT RICH, P.E. - PEER REVIEWER

PROVO, UTAH 2008-5-22 526-418-751

DATE AND TIME PLOTTED
10-6-2008 8:15 AM
PLOTTED BY
EMANSEAU

CAD SYSTEM
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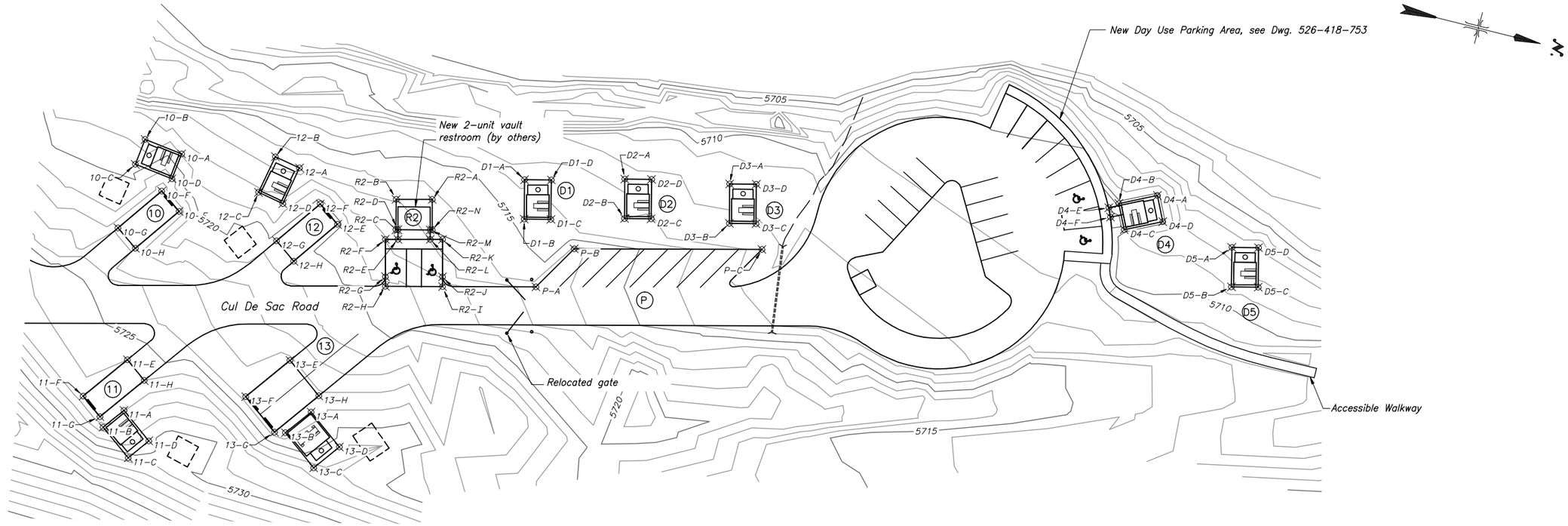

CONTROL POINTS				
Point #	Description	Northing	Easting	Elevation
12108	11-A	3480719.49	1618358.08	5727.20
12109	11-B	3480711.93	1618369.86	5727.20
12110	11-C	3480729.32	1618381.03	5727.20
12111	11-D	3480736.89	1618369.25	5727.20
12112	11-E	3480713.02	1618332.32	5726.00
12113	11-F	3480696.78	1618357.54	5726.30
12114	11-G	3480708.55	1618365.12	5726.30
12115	11-H	3480724.79	1618339.90	5726.00
12116	13-A	3480813.20	1618328.56	5724.50
12117	13-B	3480803.80	1618343.02	5724.50
12118	13-C	3480823.59	1618355.92	5724.50
12119	13-D	3480832.99	1618341.45	5724.50
12120	13-E	3480794.32	1618306.23	5723.20
12121	13-F	3480778.08	1618331.45	5723.50
12122	13-G	3480798.26	1618344.44	5723.50
12123	13-H	3480814.50	1618319.22	5723.20
12164	12-A	3480767.92	1618208.70	5717.50
12165	12-B	3480754.02	1618206.95	5717.50
12166	12-C	3480751.44	1618227.47	5717.50
12167	12-D	3480765.33	1618229.22	5717.50
12168	12-E	3480796.02	1618230.66	5720.50
12169	12-F	3480784.13	1618223.27	5720.50
12170	12-G	3480768.29	1618248.75	5720.80
12171	12-H	3480780.18	1618256.14	5720.80

CONTROL POINTS				
Point #	Description	Northing	Easting	Elevation
12172	10-A	3480706.78	1618220.75	5721.00
12173	10-B	3480686.14	1618219.53	5721.00
12174	10-C	3480685.32	1618233.50	5721.00
12175	10-D	3480705.96	1618234.73	5721.00
12176	10-E	3480714.77	1618249.94	5722.60
12177	10-F	3480702.88	1618242.55	5722.60
12178	10-G	3480687.05	1618268.03	5722.90
12179	10-H	3480698.94	1618275.42	5722.90
12298	R2-A	3480839.30	1618202.83	5718.63
12299	R2-B	3480821.21	1618208.63	5718.63
12300	R2-C	3480826.10	1618223.87	5718.63
12301	R2-D	3480827.05	1618223.56	5718.63
12302	R2-E	3480828.58	1618228.32	5718.58
12303	R2-F	3480822.39	1618230.31	5718.58
12304	R2-G	3480828.39	1618249.02	5718.96
12305	R2-H	3480829.92	1618253.78	5719.46
12306	R2-I	3480858.49	1618244.61	5718.39
12307	R2-J	3480856.96	1618239.85	5718.93
12308	R2-K	3480850.96	1618221.14	5718.58
12309	R2-L	3480844.77	1618223.13	5718.58
12310	R2-M	3480843.24	1618218.37	5718.63
12311	R2-N	3480844.19	1618218.06	5718.63
13194	D1-A	3480882.22	1618178.05	5714.00
13195	D1-B	3480888.44	1618197.77	5714.00

CONTROL POINTS				
Point #	Description	Northing	Easting	Elevation
13196	D1-C	3480901.79	1618193.56	5714.00
13197	D1-D	3480895.57	1618173.84	5714.00
13198	D2-A	3480932.16	1618161.46	5713.00
13199	D2-B	3480938.38	1618181.18	5713.00
13200	D2-C	3480951.73	1618176.97	5713.00
13201	D2-D	3480945.52	1618157.25	5713.00
13202	D3-A	3480985.29	1618146.86	5712.00
13203	D3-B	3480991.51	1618166.58	5712.00
13204	D3-C	3481004.86	1618162.37	5712.00
13205	D3-D	3480998.64	1618142.65	5712.00
13206	D4-A	3481200.71	1618083.25	5710.30
13207	D4-B	3481182.75	1618093.50	5710.30
13208	D4-C	3481189.70	1618105.66	5710.30
13209	D4-D	3481207.65	1618095.40	5710.30
13210	D4-E	3481178.45	1618097.26	5710.44
13211	D4-F	3481180.81	1618101.67	5710.51
13212	D5-A	3481246.29	1618097.07	5708.00
13213	D5-B	3481252.51	1618116.79	5708.00
13214	D5-C	3481265.86	1618112.58	5708.00
13215	D5-D	3481259.64	1618092.86	5708.00
13216	P-A	3480905.18	1618229.62	5716.65
13217	P-B	3480918.11	1618204.47	5716.22
13218	P-C	3481012.03	1618174.32	5712.71

NOTE

1. For Notes and Explanation, see Dwg. 526-418-750.
2. For Typical Accessible Parking Detail see Dwg. 526-418-776.

REFERENCE DRAWINGS

BIG ROCK SITE PLAN 526-418-740
BIG ROCK CAMPGROUND FINISH GRADING POINTS
CAMPSITE NOS. 1-14.....526-418-750
BIG ROCK CAMPGROUND FINISH GRADING POINTS
CAMPSITE NOS. 24-35..... 526-418-751
BIG ROCK CAMPGROUND
DAY USE PARKING PLAN.....526-418-753
TYPICAL PAVEMENT AND SIDEWALK DETAILS.... 526-418-776

30 0 30 60 90
SCALE OF FEET

REV NO		
1	2008-09-24 400 E. MANSEAU	ADDED REFERENCE TO DWG. 526-418-776 FOR TYPICAL ACCESSIBLE PARKING AND SINAGE DETAIL.

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK
RECREATION REHABILITATION - PHASE III

BIG ROCK CAMPGROUND
FINISH GRADING POINTS CAMPSITE NOS. 15-23

DESIGNED _ /S/ Jay Bytheway, P.E. _ _ _ CHECKED _ _ /S/ Bart Leeflang _ _ _ _ _ _
DRAWN _ _ /S/ Jay Bytheway, P.E. _ _ _ TECH. APPR. _ _ /S/ Jay Bytheway, P.E. _ _ _
JAY BYTHEWAY, P.E.
APPROVED _ _ _ /S/ Scott Rich, P.E. _ _ _ _ _ _ _ _
SCOTT RICH, P.E. - PEER REVIEWER

PROVO, UTAH 2008-5-22 526-418-752

DATE AND TIME PLOTTED
10-15-2008 7:15 AM
PLOTTED BY
EMANSEAU

CAD SYSTEM
AUTOCAD Rel. 17.2S (LMS TECH)
CAD FILENAME
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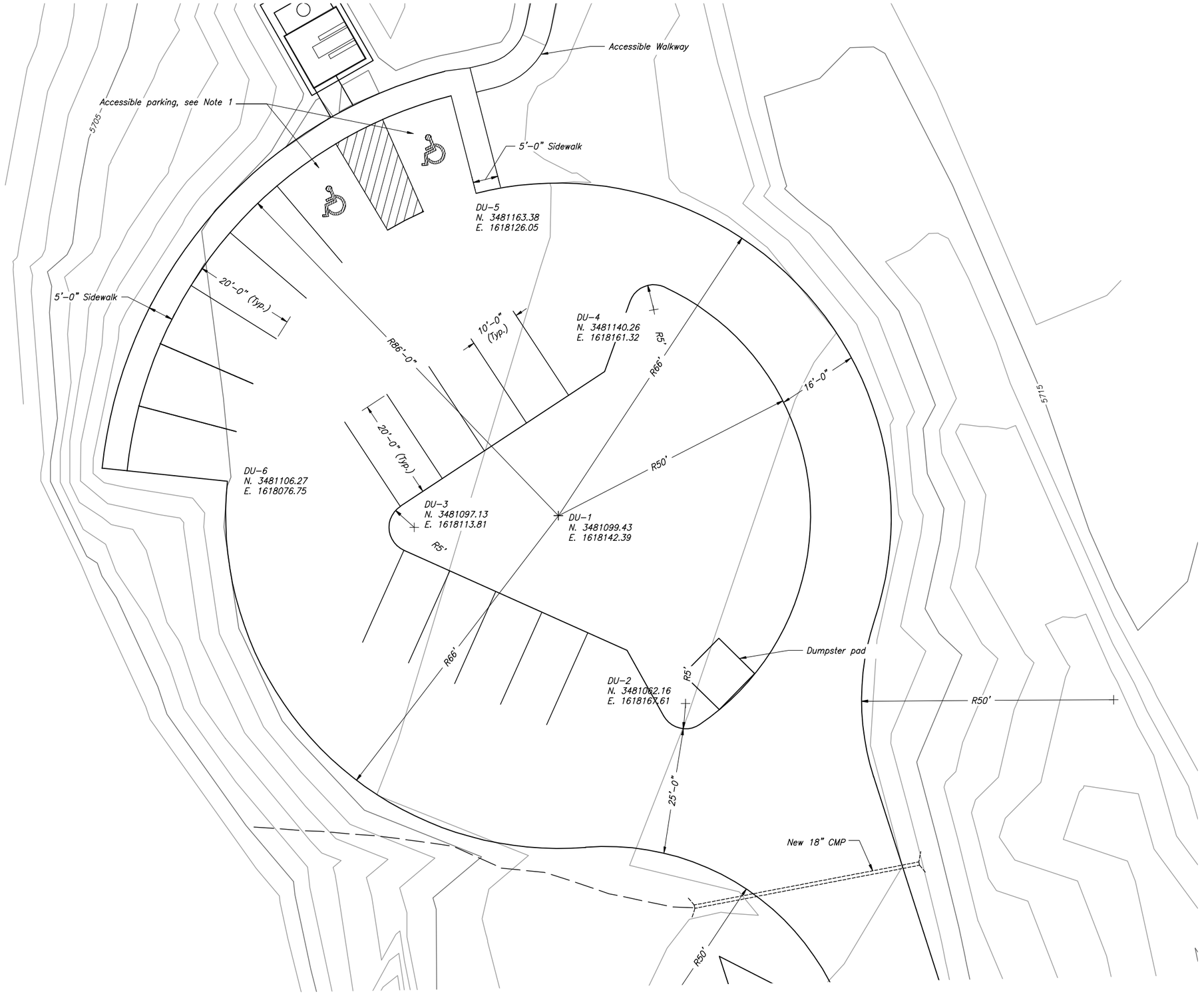

N.

NOTE

1. Accessible parking dimensions, signage, and striping shall comply with ADA guidelines.
2. For Typical Accessible Parking Detail see Dwg. 526-418-776.

REFERENCE DRAWINGS

BIG ROCK SITE PLAN 526-418-740
BIG ROCK CAMPGROUND FINISH GRADING POINTS
CAMPSITE NOS. 1-14.....526-418-750
BIG ROCK CAMPGROUND FINISH GRADING POINTS
CAMPSITE NOS. 24-35..... 526-418-751
BIG ROCK CAMPGROUND FINISH GRADING POINTS
CAMPSITE NOS. 15-23..... 526-418-752
TYPICAL PAVEMENT AND SIDEWALK DETAILS... 526-418-776

10 0 10 20 30
SCALE OF FEET

REV NO		
1	2008-09-24 400 E. MANSEAU	ADDED REFERENCE TO DWG. 526-418-776 FOR TYPICAL ACCESSIBLE PARKING AND SINAGE DETAIL.

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK
RECREATION REHABILITATION - PHASE III
BIG ROCK CAMPGROUND DAY USE PARKING PLAN

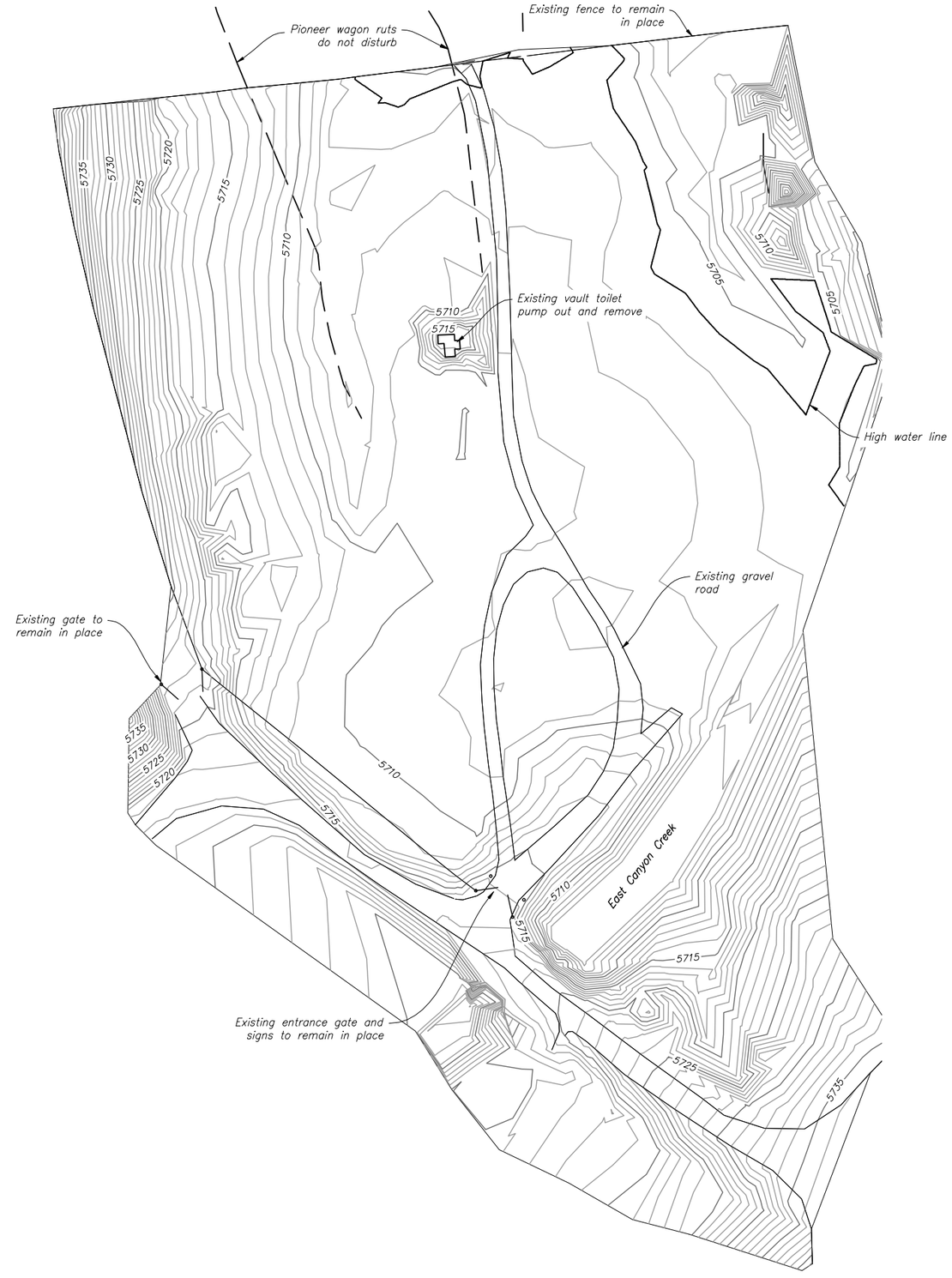
DESIGNED /S/ Jay Bytheway, P.E. CHECKED /S/ Bart Leeflang
DRAWN /S/ Jay Bytheway, P.E. TECH. APPR. /S/ Jay Bytheway, P.E. JAY BYTHEWAY, P.E.
APPROVED /S/ Scott Rich, P.E. SCOTT RICH, P.E. - PEER REVIEWER

PROVO, UTAH 2008-5-22 526-418-753

DATE AND TIME PLOTTED 16-Oct-08 7:15 AM PLOTTED BY EMANSEAU

CAD SYSTEM AUTOCAD Rel. 17.1S (LMS TECH)
CAD FILENAME Q:\ES\EMILY\Jay\East Canyon\Final\pdf 11-20-2008\526-418-740-53 770-75 VSa.dwg

526-418-770



N.

NOTES

1. Contour interval is 1 foot.
2. Contours shown are existing ground.
3. All structures, grills, fire pits, table anchors, and items not identified on this drawing shall be demolished unless specified otherwise.
4. Existing road signs shall remain in place.

REFERENCE DRAWINGS

RIVER EDGE FINISH SITE PLAN.....526-418-771
RIVER EDGE GRADING PLAN.....526-418-772
RIVER EDGE ENTRANCE ROAD PLAN.....526-418-773
RIVER EDGE ENTRANCE ROAD PROFILE.....526-418-774
RIVER EDGE WALKWAYS
PLAN AND PROFILE.....526-418-775

40 0 40 80 120
SCALE OF FEET

ALTERNATE 1

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK
RECREATION REHABILITATION - PHASE III

RIVER EDGE EXISTING SITE CONDITIONS AND DEMOLITION PLAN

DESIGNED _/S/ Jay Bytheway, P.E._ CHECKED_ /S/ Bart Leeflang
DRAWN _/S/ Jay Bytheway, P.E._ TECH. APPR. _/S/ Jay Bytheway, P.E._
JAY BYTHEWAY, P.E.
APPROVED /S/ Scott Rich, P.E.
SCOTT RICH, P.E. - PEER REVIEWER

PROVO, UTAH 2008-5-22 526-418-770

CAD SYSTEM AUTOCAD Rel. 17.1S (LMS TECH)
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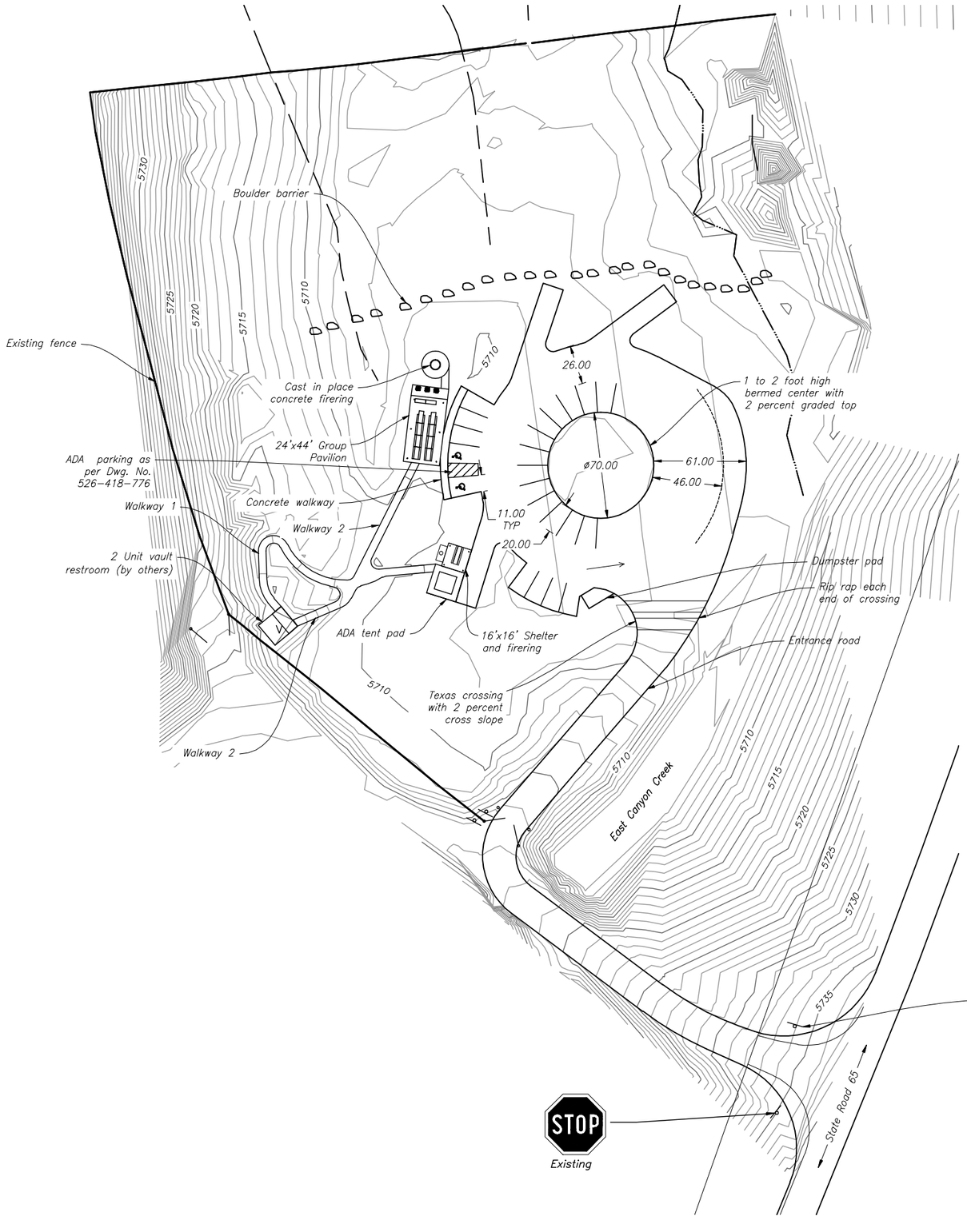
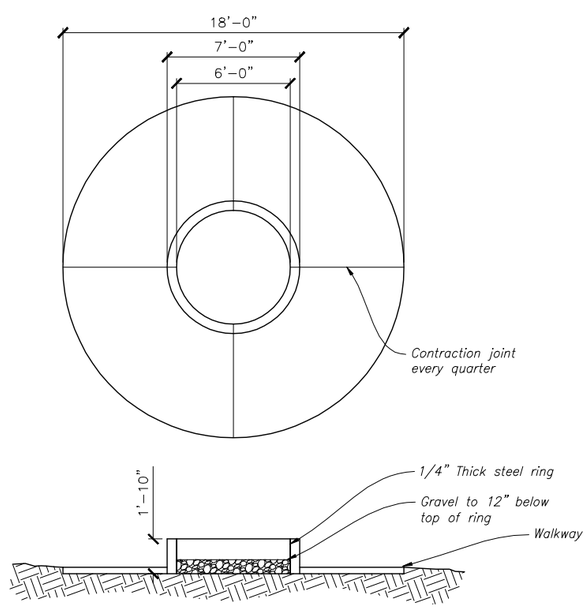
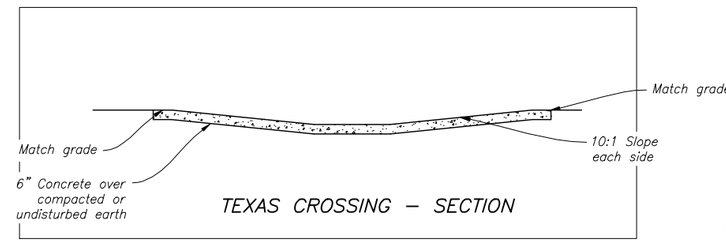
PLOTTED BY JBYTHEWAY





CAST-IN-PLACE CONCRETE FIRERING



TEXAS CROSSING – SECTION

NOTES

1. Contour interval is 1 foot.
2. Calculated cut=650 cubic yards and calculated fill=1050 cubic yards. Import material from Big Rock campsite to make up the difference.
3. For Typical Accessible Parking Detail see Dwg. 526-418-776.

REFERENCE DRAWINGS

RIVER EDGE EXISTING SITE CONDITIONS AND DEMOLITION PLAN.....526-418-770
RIVER EDGE GRADING PLAN.....526-418-772
RIVER EDGE ENTRANCE ROAD PLAN.....526-418-773
RIVER EDGE ENTRANCE ROAD PROFILE.....526-418-774
RIVER EDGE WALKWAYS PLAN AND PROFILE.....526-418-775
TYPICAL PAVEMENT AND SIDEWALK DETAILS.....526-418-776

40 0 40 80 120
SCALE OF FEET

ALTERNATE 1

REV NO	2008-09-24 400 E. MANSEAU	ADDED REFERENCE TO DWG. 526-418-776 FOR TYPICAL ACCESSIBLE PARKING AND SINAGE DETAIL.
1		

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BUREAU OF RECLAMATION
WEBER BASIN PROJECT
UTAH

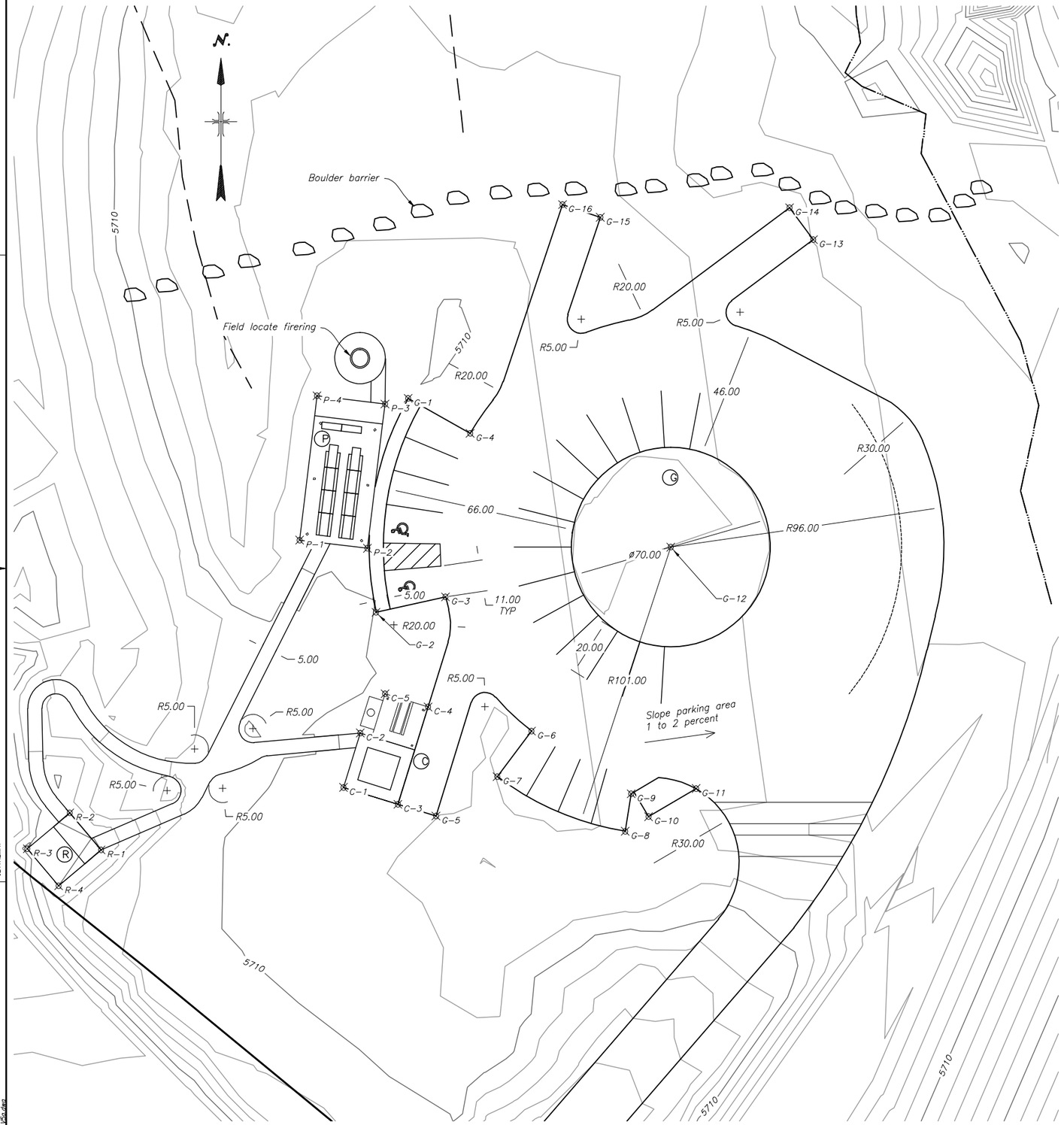
EAST CANYON STATE PARK
RECREATION REHABILITATION – PHASE III
RIVER EDGE FINISHED SITE PLAN

DESIGNED /S/ Jay Bytheway, P.E. CHECKED /S/ Bart Leeflang
DRAWN /S/ Jay Bytheway, P.E. TECH. APPR. /S/ Jay Bytheway, P.E. JAY BYTHEWAY, P.E.
APPROVED /S/ Scott Rich, P.E. SCOTT RICH, P.E. – PEER REVIEWER

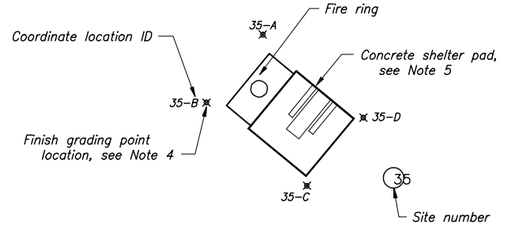
PROVO, UTAH 2008-5-22 526-418-771

DATE AND TIME PLOTTED 16-Oct-08 7:15 AM PLOTTED BY EMANSEAU

CAD SYSTEM AUTOCAD Rel. 17.1S (LMS TECH) CAD FILENAME Q:\ES\EMILY\Jay\East Canyon\Final\pdf 11-20-2008\526-418-740-53 770-75 V5a.dwg



CONTROL POINTS				
Point #	Description	Northing	Easting	Elevation
13004	R-1	3478812.69	1617670.96	5715.00
13005	R-2	3478825.68	1617660.00	5715.00
13006	R-3	3478813.10	1617645.10	5715.00
13007	R-4	3478800.11	1617656.06	5715.00
13169	P-1	3478921.46	1617740.67	5709.92
13170	P-2	3478918.58	1617764.49	5709.92
13171	P-3	3478969.21	1617770.61	5709.92
13172	P-4	3478972.09	1617746.79	5709.92
13173	C-1	3478834.66	1617756.04	5709.92
13174	C-2	3478853.77	1617761.97	5709.92
13175	C-3	3478828.74	1617775.14	5709.92
13176	C-4	3478862.88	1617785.74	5709.92
13177	C-5	3478867.55	1617770.70	5709.92
13178	G-1	3478971.26	1617778.76	–
13179	G-2	3478896.13	1617767.46	–
13180	G-3	3478901.51	1617791.87	–
13181	G-4	3478958.92	1617800.51	–
13182	G-5	3478824.59	1617788.51	–
13183	G-6	3478854.39	1617822.09	–
13184	G-7	3478838.44	1617810.02	–
13185	G-8	3478819.25	1617854.96	–
13186	G-9	3478832.39	1617857.07	–
13187	G-10	3478824.37	1617863.15	–
13188	G-11	3478834.26	1617879.84	–
13189	G-12	3478918.97	1617870.97	–
13190	G-13	3479026.93	1617920.99	–
13191	G-14	3479038.15	1617912.61	–
13192	G-15	3479034.77	1617846.21	–
13193	G-16	3479039.21	1617832.93	–



NOTES

1. Contour interval is 1 foot.
2. Contours shown are finish grade.
3. Camp site numbers are for reference only.
4. Finish grading points are offset 9 inches ± out from the concrete shelter pad and fire ring pad for small shelters only. All other elevations are top of concrete or pavement.
5. Concrete shelter pads shall protrude 1 to 2 inches above the finish grade.
6. Maximum grading slope shall be 3:1.
7. Elevation for points G1 through G16 to be determined in the field.
8. For Typical Accessible Parking Detail see Dwg. 526-418-776.

REFERENCE DRAWINGS

RIVER EDGE EXISTING SITE CONDITIONS AND DEMOLITION PLAN.....526-418-770
RIVER EDGE FINISH SITE PLAN.....526-418-771
RIVER EDGE ENTRANCE ROAD PLAN.....526-418-773
RIVER EDGE ENTRANCE ROAD PROFILE.....526-418-774
RIVER EDGE WALKWAYS PLAN AND PROFILE.....526-418-775
TYPICAL PAVEMENT AND SIDEWALK DETAILS.....526-418-776

20 0 20 40 60
SCALE OF FEET HORIZONTAL

ALTERNATE 1

REV NO		
1	2008-09-24 400 E. MANSEAU	ADDED REFERENCE TO DWG. 526-418-776 FOR TYPICAL ACCESSIBLE PARKING AND SINAGE DETAIL.

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK

RECREATION REHABILITATION – PHASE III

RIVER EDGE GRADING PLAN

DESIGNED _ /S/ Jay Bytheway, P.E. _ _ _ CHECKED _ /S/ Bart Leeflang _ _ _ _ _ _ _
DRAWN _ _ /S/ Jay Bytheway, P.E. _ _ _ TECH. APPR. _ /S/ Jay Bytheway, P.E. _ _
JAY BYTHEWAY, P.E.
APPROVED _ _ _ /S/ Scott Rich, P.E. _ _ _ _ _ _ _ _
SCOTT RICH, P.E. – PEER REVIEWER

PROVO, UTAH 2008-5-22 526-418-772

DATE AND TIME PLOTTED
2008-09-24 11:11 AM
PLOTTED BY
JBYTHEWAY

CAD SYSTEM
AUTOCAD Rel. 17.2S (LMS TECH)
CAD FILENAME
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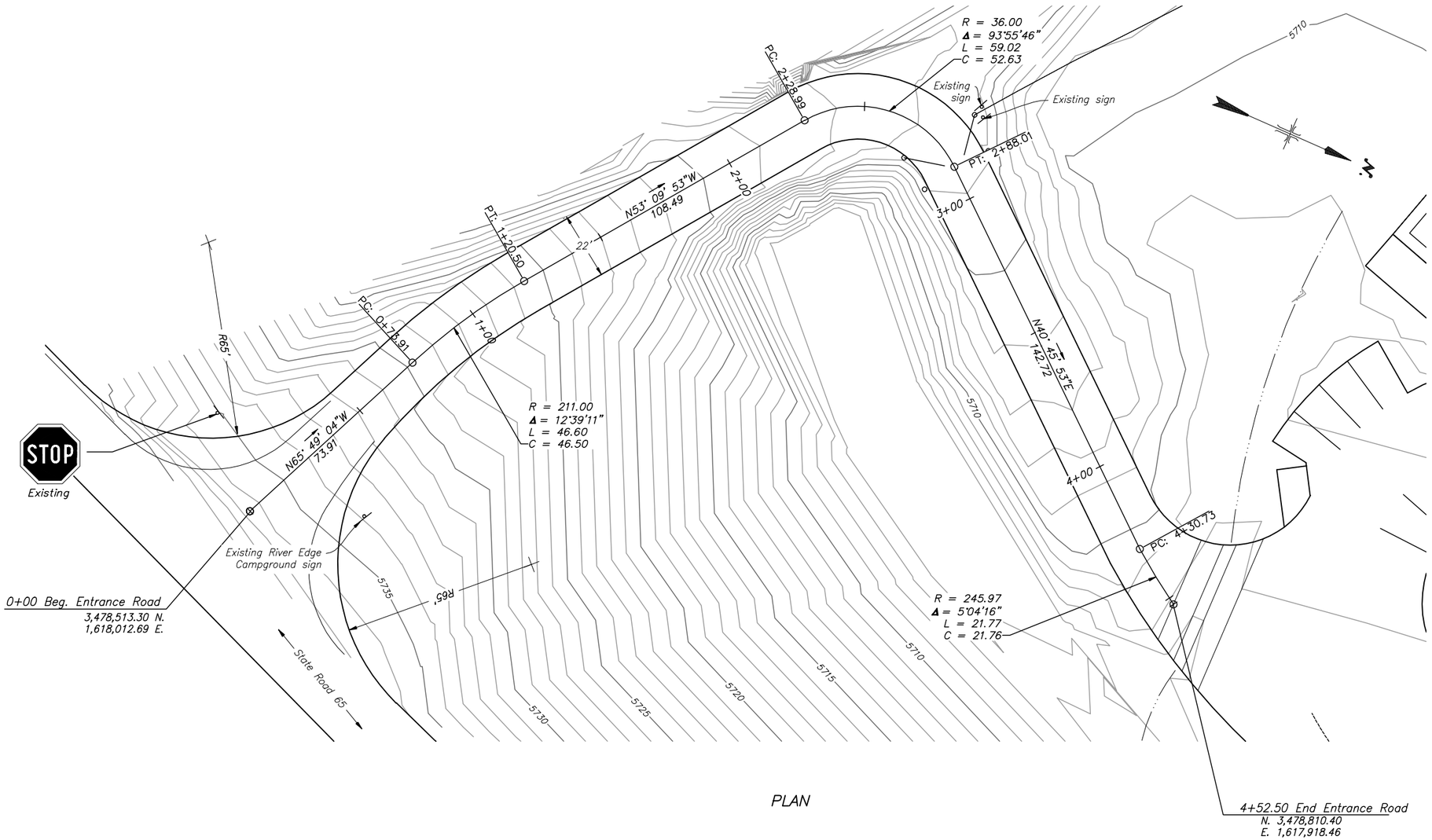

PLAN

ALTERNATE 1

NOTES

1. Contour interval is 1 foot.
2. Contours shown are finished ground.

REFERENCE DRAWINGS

RIVER EDGE EXISTING SITE CONDITIONS AND DEMOLITION PLAN.....526-418-770
RIVER EDGE FINISH SITE PLAN.....526-418-771
RIVER EDGE GRADING PLAN.....526-418-772
RIVER EDGE ENTRANCE ROAD PROFILE.....526-418-774
RIVER EDGE WALKWAYS PLAN AND PROFILE.....526-418-775

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DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK

RECREATION REHABILITATION - PHASE III

RIVER EDGE ENTRANCE ROAD
PLAN

DESIGNED /S/ Jay Bytheway, P.E. CHECKED /S/ Bart Leeflang
DRAWN /S/ Jay Bytheway, P.E. TECH. APPR. /S/ Jay Bytheway, P.E.
JAY BYTHEWAY, P.E.
APPROVED /S/ Scott Rich, P.E.
SCOTT RICH, P.E. - PEER REVIEWER

PROVO, UTAH 2008-5-22 526-418-773

CAD SYSTEM
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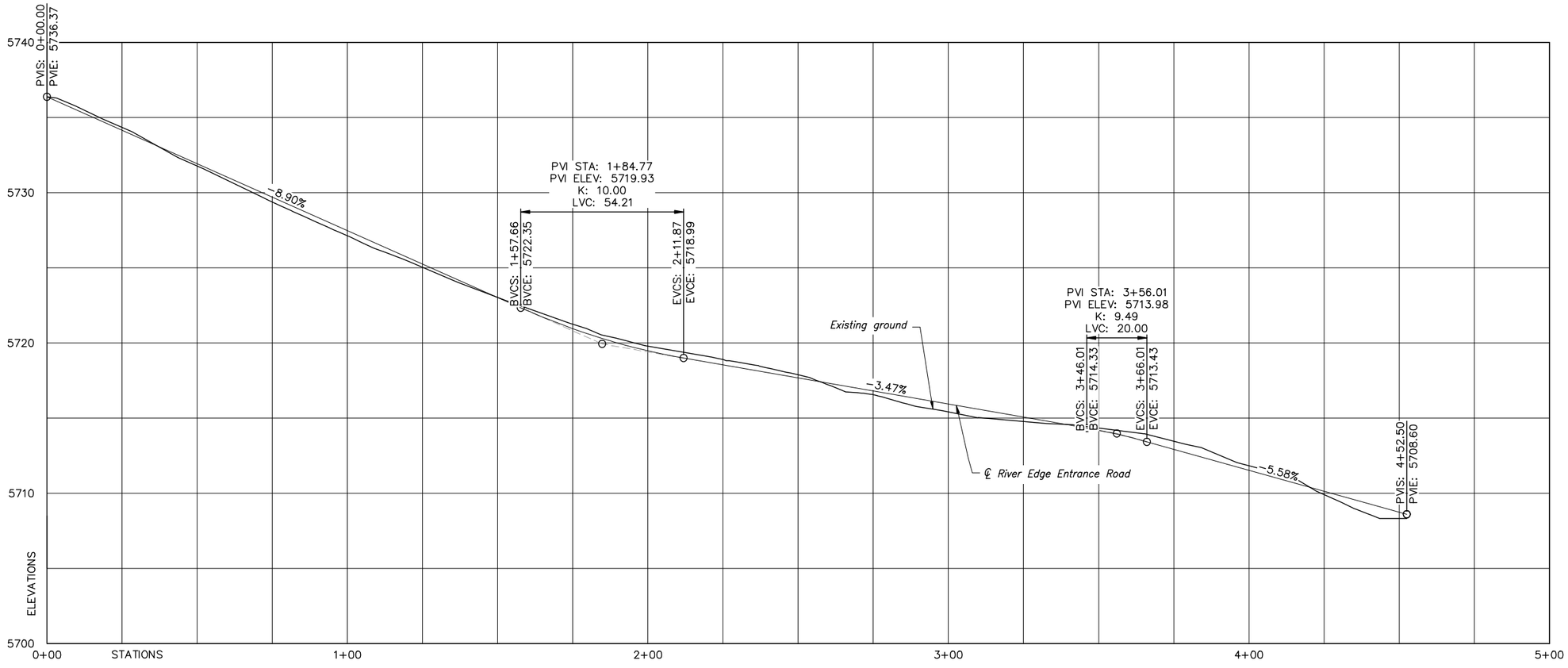
PLOTTED BY
JBYTHEWAY



PROFILE

20 0 20 40 60
SCALE OF FEET
HORIZONTAL

4 0 4 8 12
SCALE OF FEET
VERTICAL

REFERENCE DRAWINGS

RIVER EDGE EXISTING SITE CONDITIONS AND DEMOLITION PLAN.....526-418-770
RIVER EDGE FINISH SITE PLAN.....526-418-771
RIVER EDGE GRADING PLAN.....526-418-772
RIVER EDGE ENTRANCE ROAD PLAN.....526-418-773
RIVER EDGE WALKWAYS PLAN AND PROFILE.....526-418-775

ALTERNATE 1

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DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK
RECREATION REHABILITATION - PHASE III
RIVER EDGE ENTRANCE ROAD PROFILE

DESIGNED _/S/ Jay Bytheway, P.E._ CHECKED_ _/S/ Bart Leeflang_
DRAWN _/S/ Jay Bytheway, P.E._ TECH. APPR. _/S/ Jay Bytheway, P.E._
JAY BYTHEWAY, P.E.
APPROVED _/S/ Scott Rich, P.E._
SCOTT RICH, P.E. - PEER REVIEWER

PROVO, UTAH 2008-5-22 526-418-774

DATE AND TIME PLOTTED
26-Aug-08 4:01 PM
PLOTTED BY
JBYTHEWAY

CAD SYSTEM
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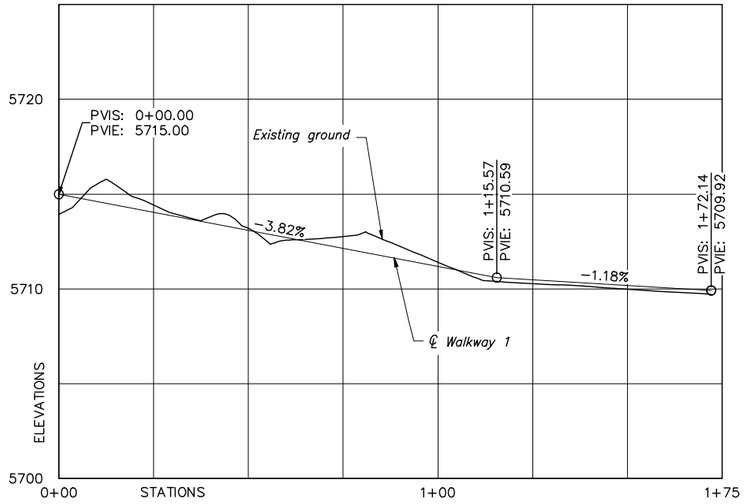
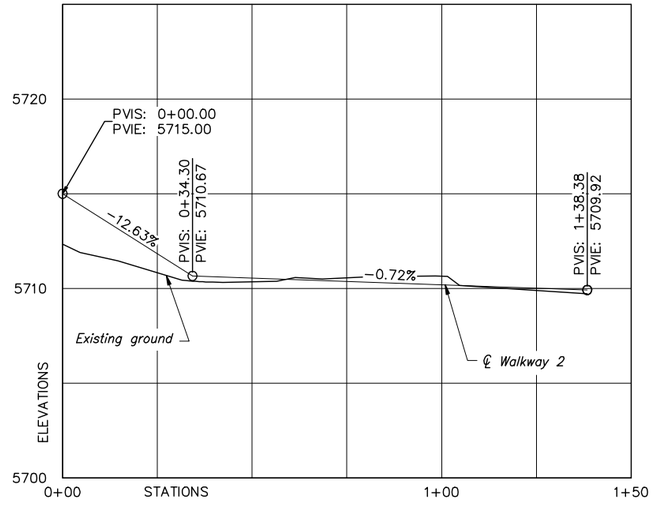
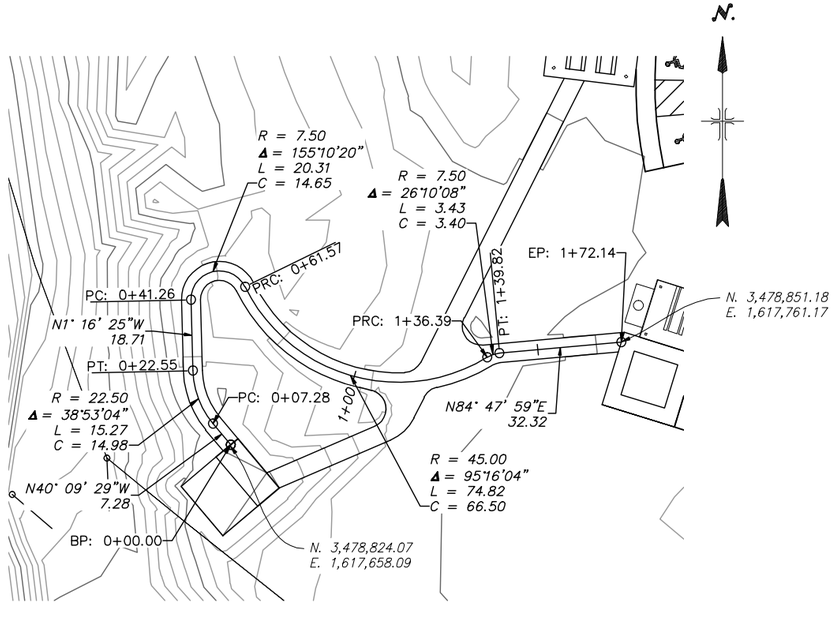


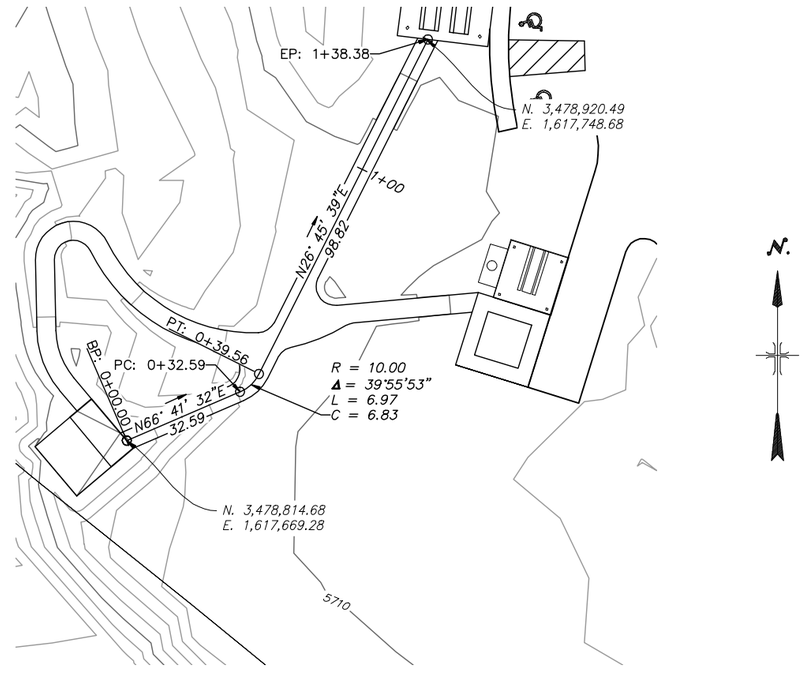
WALKWAY 1 PROFILE



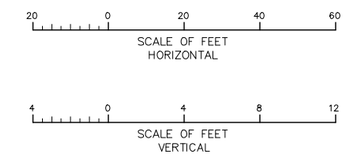
WALKWAY 2 PROFILE



WALKWAY 1 PLAN



WALKWAY 2 PLAN



NOTES

1. Contour interval is 1 foot.
2. Contours shown are finished ground.

REFERENCE DRAWINGS

RIVER EDGE EXISTING SITE CONDITIONS AND DEMOLITION PLAN.....526-418-770
RIVER EDGE FINISH SITE PLAN.....526-418-771
RIVER EDGE GRADING PLAN.....526-418-772
RIVER EDGE ENTRANCE ROAD PLAN.....526-418-773
RIVER EDGE ENTRANCE ROAD PROFILE.....526-418-774

ALTERNATE 1

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK
RIVER EDGE WALKWAYS
PLAN AND PROFILE

DESIGNED /S/ Jay Bytheway, P.E. CHECKED /S/ Bart Leeflang
DRAWN /S/ Jay Bytheway, P.E. TECH. APPR. /S/ Jay Bytheway, P.E. JAY BYTHEWAY, P.E.
APPROVED /S/ Scott Rich, P.E. SCOTT RICH, P.E. - PEER REVIEWER

PROVO, UTAH 2008-5-22 526-418-775

DATE AND TIME PLOTTED 26-Aug-08 4:01 PM PLOTTED BY JBYTHEWAY

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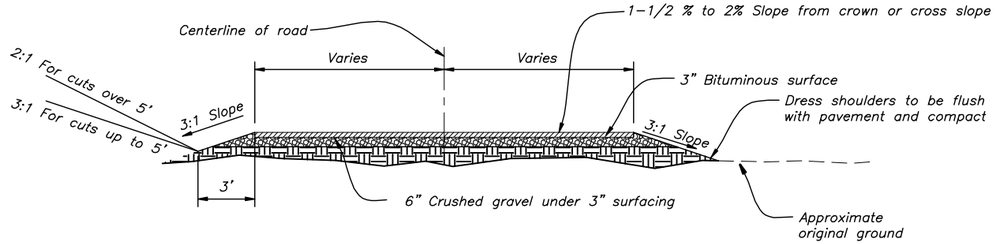
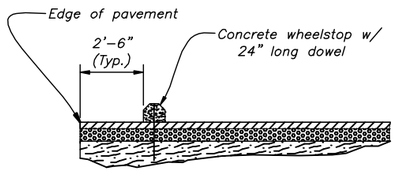
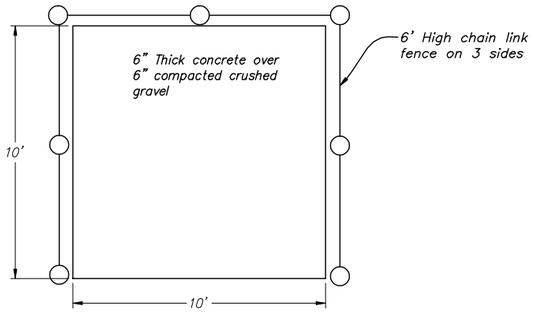


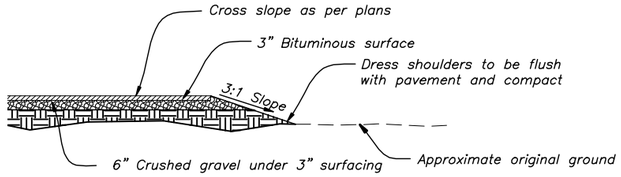
TYPICAL ROAD SECTION



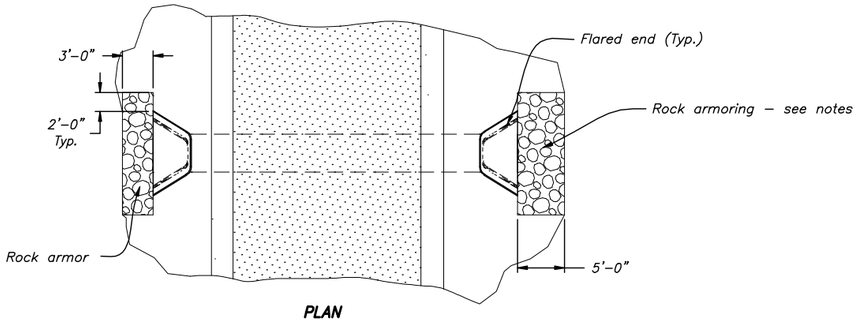
TYPICAL WHEELSTOP



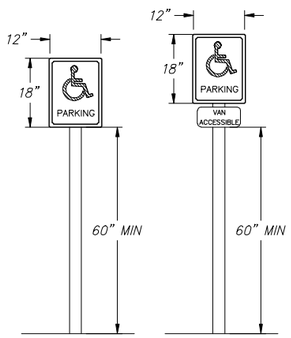
DUMPSTER PAD



TYPICAL PAVEMENT SECTION

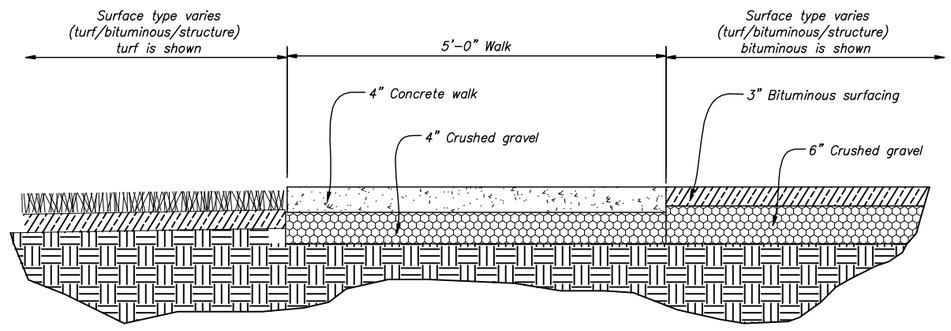


PLAN

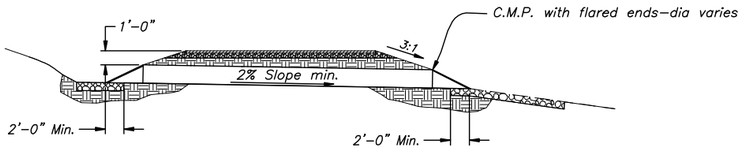


ACCESSIBLE SIGN DETAILS

Embed sign posts 28" in a 30" deep, 8" diameter hole and backfill with concrete.

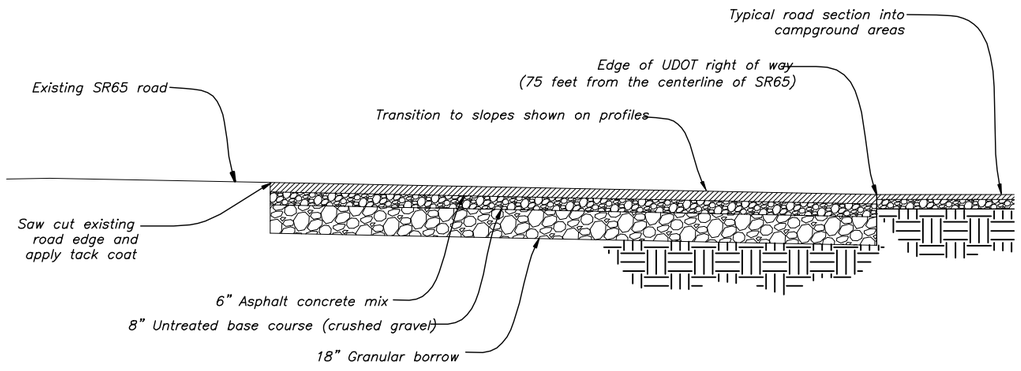


TYPICAL SIDEWALK SECTION

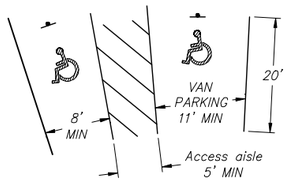


SECTION

TYPICAL CULVERT



SR65 ACCESS SECTION



TYPICAL ACCESSIBLE PARKING DETAIL

MAXIMUM GRADE 1.5%

NOTE: Access aisle shall adjoin an accessible route at the head of the parking spaces.

NOTES

1. This drawing is not to scale.
2. Rock armoring on culverts consists of 6"to 8" round river rock placed over geotextile.

REV NO		
1	2008-09-24 400 E. MANSEAU	ADDED TYPICAL ACCESSIBLE PARKING AND SIGNAGE DETAILS.

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

WEBER BASIN PROJECT

UTAH

EAST CANYON STATE PARK

RECREATION REHABILITATION - PHASE III

TYPICAL PAVEMENT AND SIDEWALK DETAILS

DESIGNED _ /S/ Jay Bytheway, P.E. _ CHECKED _ /S/ Bart Leeflang

DRAWN _ /S/ Jay Bytheway, P.E. _ TECH. APPR. _ /S/ Jay Bytheway, P.E.
JAY BYTHEWAY, P.E.

APPROVED _ /S/ Scott Rich, P.E. _
SCOTT RICH, P.E. - PEER REVIEWER

PROVO, UTAH 2008-5-22 526-418-776

DATE AND TIME PLOTTED
23-Oct-08 2:01 PM
REVISED BY
JBYTHEWAY

CAD SYSTEM
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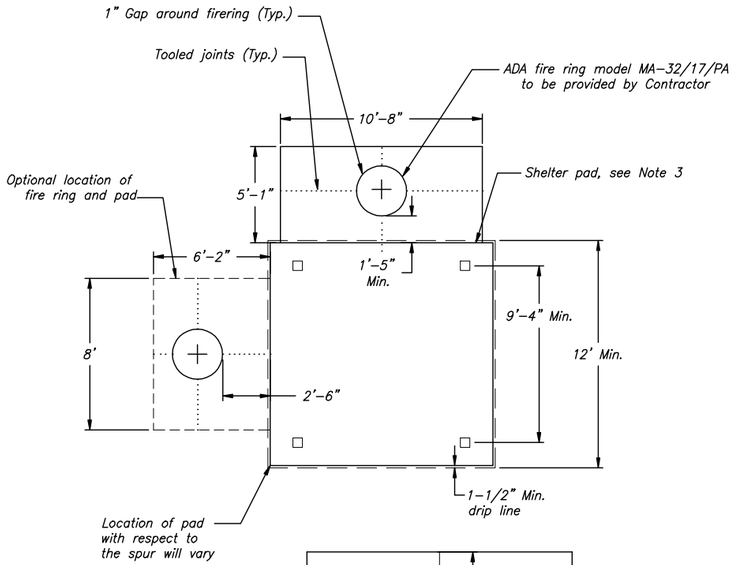
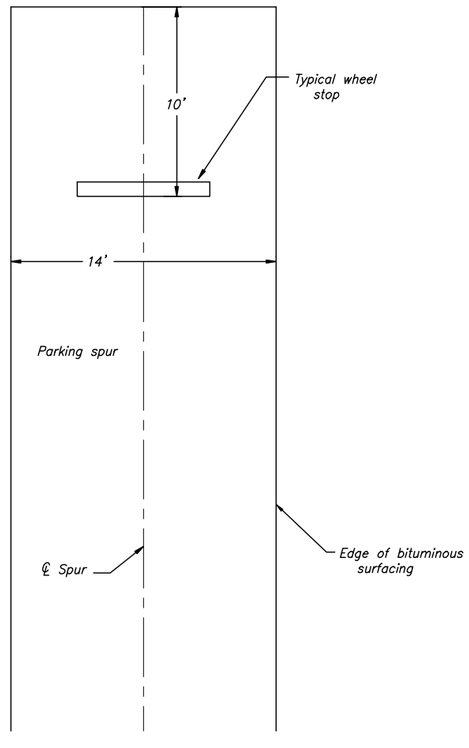
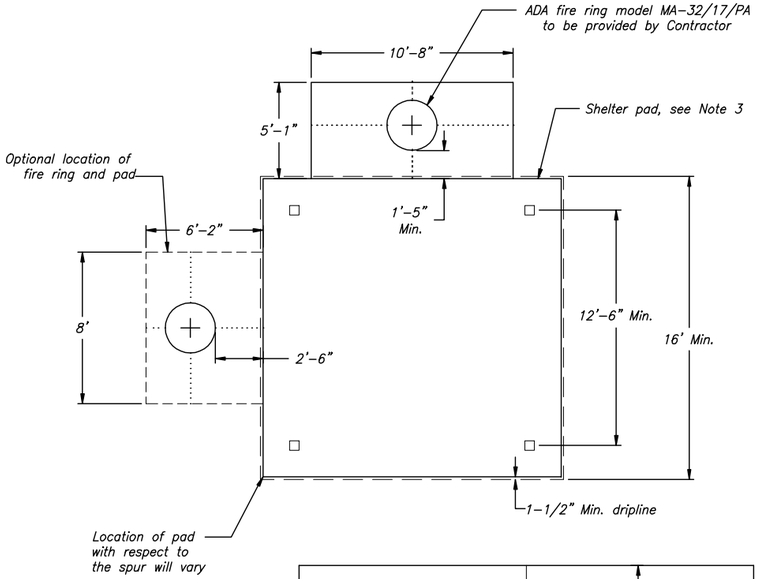
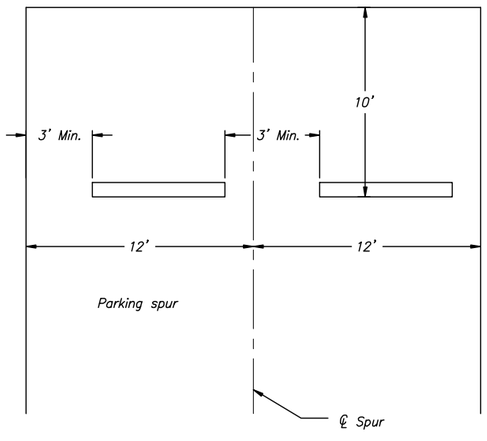




TYPICAL SINGLE SPUR PLAN AND SHELTER LAYOUT





TYPICAL DOUBLE SPUR PLAN AND SHELTER LAYOUT

NOTES

1. Actual feature locations may vary slightly from those shown. The Government Surveyors will adjust final stationing and elevations to best fit existing conditions.
2. Fire rings to be provided by Contractor.
3. Shelters will be provided by Others.
4. The plan shown indicates the desired number of fixtures and approximate dimensions. Minor modifications may be allowed if submitted and approved.

4 0 4 8 12
SCALE OF FEET

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DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK

RECREATION REHABILITATION – PHASE III

TYPICAL SPUR PLANS AND SHELTER LAYOUTS

DESIGNED _/S/ Jay Bytheway, P.E._ CHECKED_ _/S/ Bart Leeflang_
DRAWN _/S/ Jay Bytheway, P.E._ TECH. APPR. _/S/ Jay Bytheway, P.E._
JAY BYTHEWAY, P.E.
APPROVED _/S/ Scott Rich, P.E._
SCOTT RICH, P.E. – PEER REVIEWER

PROVO, UTAH 2008-5-22 526-418-777

DATE AND TIME PLOTTED
10-Jul-08 7:28 AM
PLOTTED BY
JBYTHEWAY

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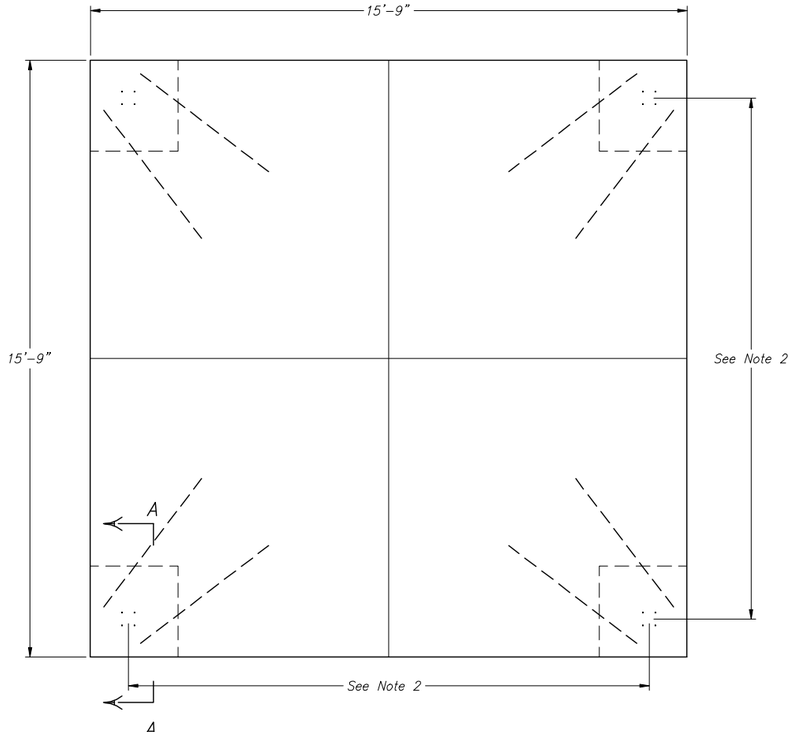
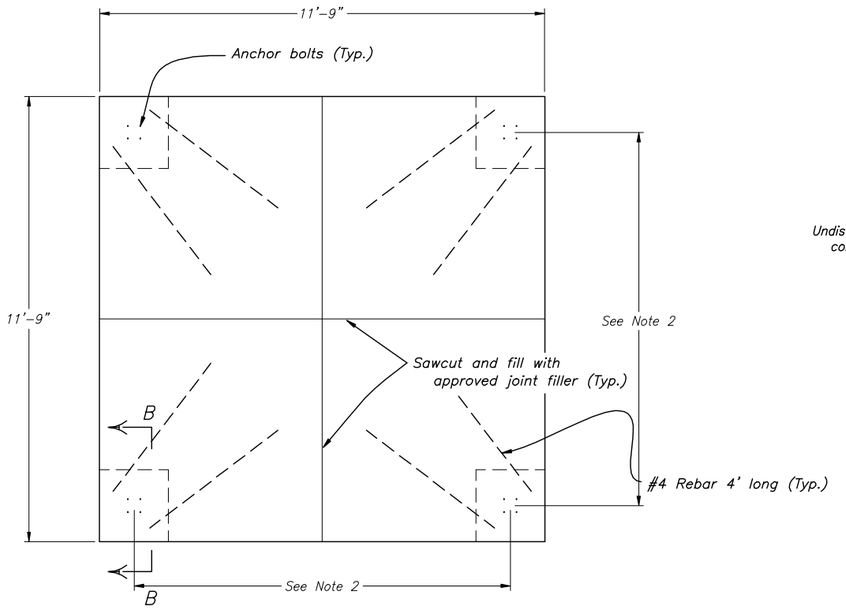
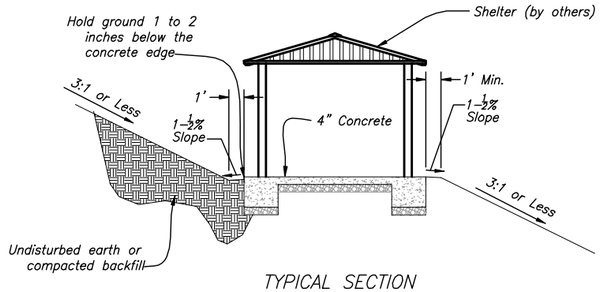


16' X 16' SHELTER CONCRETE PAD



12' X 12' SHELTER CONCRETE PAD

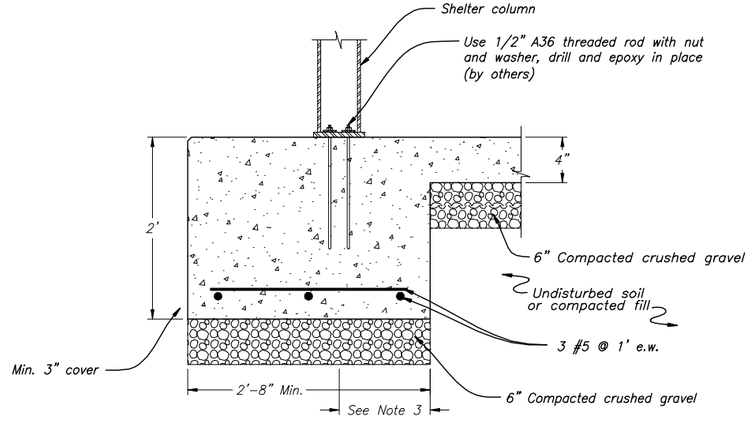


TYPICAL SECTION

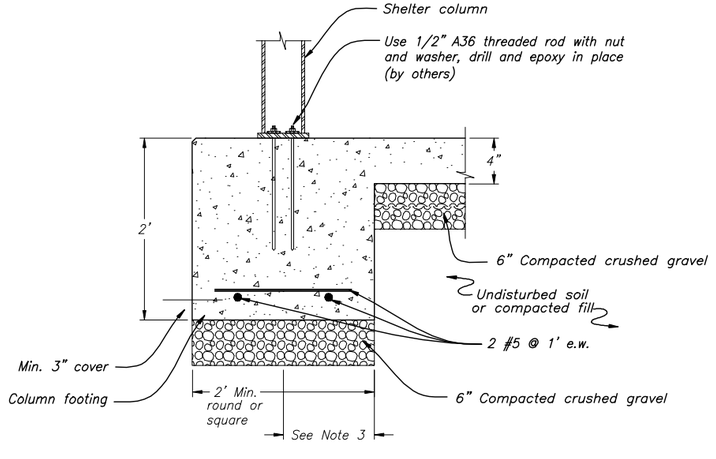
SPECIAL INSPECTION OF EPOXY ANCHORED BOLTS

The approved special inspector shall record the following:

1. *Adhesive product description, including the product name and expiration date.*
2. *Mixing procedure and use of proper nozzles.*
3. *Anchor bolt material, grade, diameter, length and cleanliness.*
4. *Required drill bit diameter.*
5. *Hole depth and cleanliness.*
6. *Installation description, including verification of concrete compressive strength by ASTM C 42 methods.*
7. *Substrate temperature.*



SECTION A-A



SECTION B-B

NOTES

1. *This drawing is not to scale.*
2. *Anchor bolts to be installed according to manufacturer's recommendations and centered on each footing (furnished and installed by others).*
3. *Epoxy anchor bolts shall be 1/2" dia. Simpson Set or 1/2" dia. Hilti HY-150 epoxy anchors. Epoxy bolts shall be fully threaded, A36 or equivalent with a minimum of 6-1/2" embedment. Clean holes before installing anchors.*
4. *See Drawing No. 40-D-6263 for General Notes and Minimum Requirements for Detailing Reinforcement.*

REV NO		
1	2008-10-14 400 J. BYTHEWAY	ADDED INFORMATION FOR EPOXY ANCHORED BOLTS TO THE NOTES AND SPECIAL INSPECTION NOTES

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

WEBER BASIN PROJECT

UTAH

EAST CANYON STATE PARK

RECREATION REHABILITATION - PHASE III

TYPICAL SHELTER CONCRETE PADS AND SECTIONS

DESIGNED	/S/ Emily Manseau	CHECKED	/S/ Bart Leeflang
DRAWN	/S/ Emily Manseau	TECH. APPR.	/S/ Jay Bytheway, P.E. JAY BYTHEWAY, P.E.
		APPROVED	/S/ Scott Rich, P.E. SCOTT RICH, P.E. - PEER REVIEWER
PROVO, UTAH	2008-5-22		526-418-778

DATE AND TIME PLOTTED
20-Nov-08 11:47 AM
PLOTTED BY
EMANSEAU

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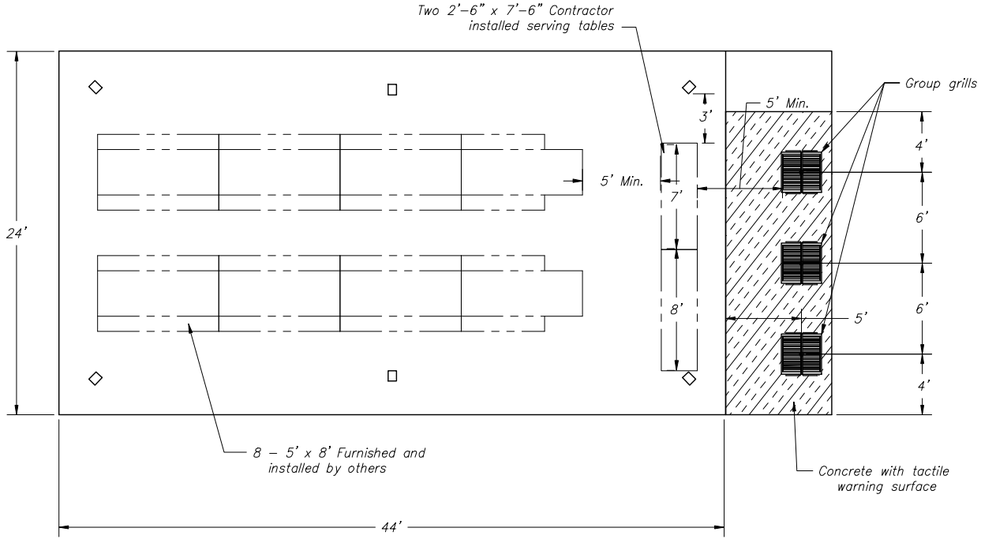
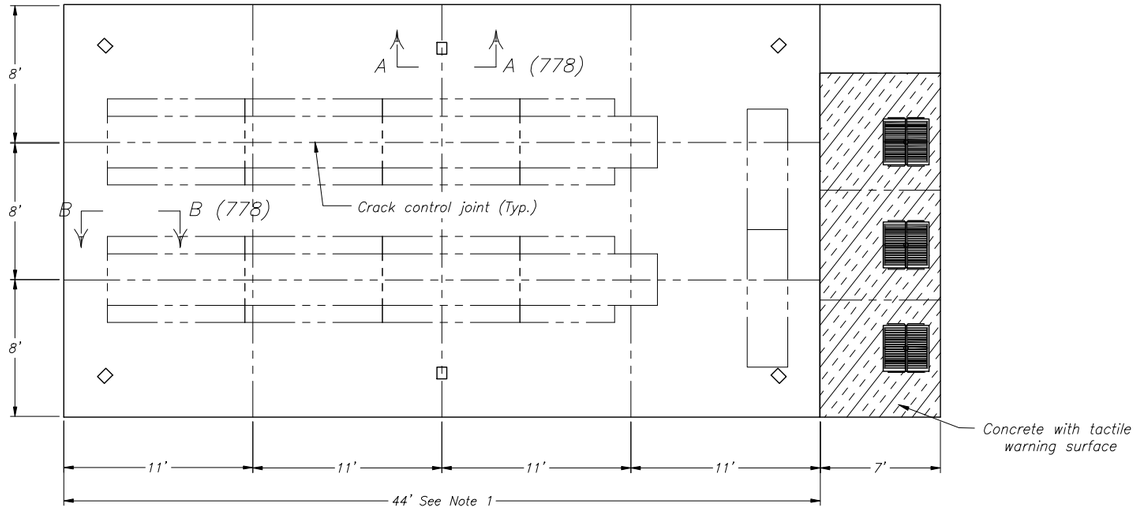
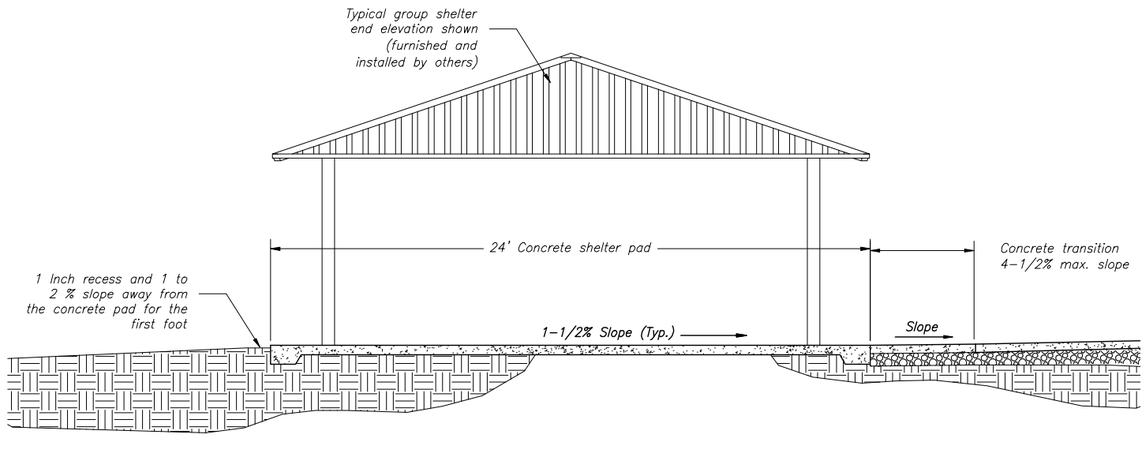


24' X 44' GROUP SHELTER PLAN



CONCRETE PLAN

5 0 5 10 15
SCALE OF FEET



TYPICAL SECTION

3 0 3 6 9
SCALE OF FEET

NOTES

1. Concrete slab width was measured to the outside of the forms.
2. Anchor bolts to be installed according to the shelter manufacturer's recommendations and specifications, and centered on each footing (furnished and installed by others).
3. Footings are to be located according to the shelter manufacturer's specifications. Shelter dimension information will be given to the Contractor as soon as it becomes available.
4. Control joints will be saw cut and filled with approved filler.
5. Actual feature locations may vary slightly from those shown.

REFERENCE DRAWINGS

RIVER EDGE FINISH SITE PLAN..... 526-418-771
GROUP SHELTER-TYPICAL CONCRETE DETAIL AND SECTIONS.....526-418-780

ALWAYS THINK SAFETY

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK
RECREATION REHABILITATION - PHASE II

24 BY 44 GROUP SHELTER PLANS AND TYPICAL SECTION

DESIGNED _/S/ Jay Bytheway, P.E._ _ CHECKED_ _ /S/ Bart Leeflang_ _ _ _ _ _ _
DRAWN _ _/S/ Jay Bytheway, P.E._ _ _ TECH. APPR. _ _ _/S/ Jay Bytheway, P.E._ _
JAY BYTHEWAY, P.E.
APPROVED _ _ _ /S/ Scott Rich, P.E. _ _ _ _ _ _ _ _
SCOTT RICH, P.E. - PEER REVIEWER

PROVO, UTAH 2008-5-22 **526-418-779**

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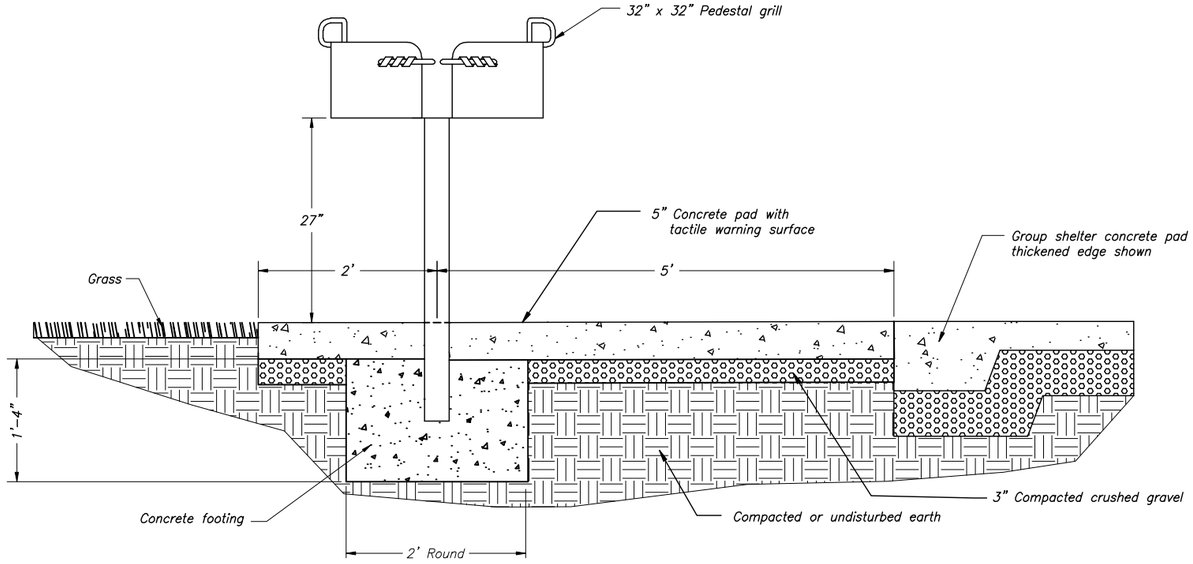
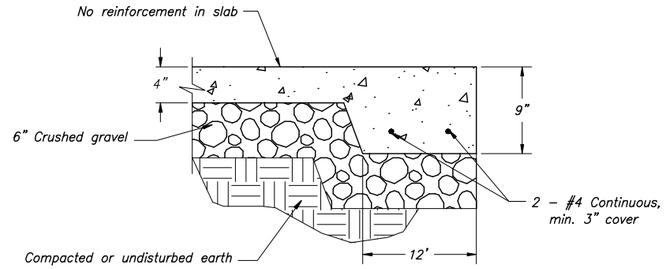
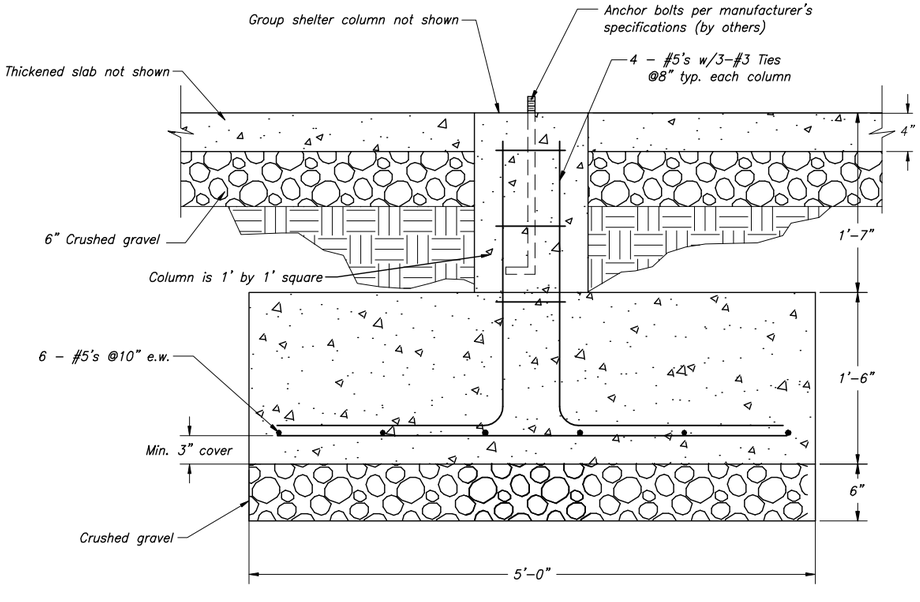


TYPICAL GROUP SHELTER PEDESTAL GRILL
NOT TO SCALE



SECTION B-B
NOT TO SCALE



SECTION A-A
NOT TO SCALE

REFERENCE DRAWINGS

RIVER EDGE FINISH SITE PLAN..... 526-418-771
24 BY 44 GROUP SHELTER
PLANS AND TYPICAL SECTION.....526-418-779

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DEPARTMENT OF THE INTERIOR
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WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK

RECREATION REHABILITATION - PHASE III

GROUP SHELTER - TYPICAL CONCRETE DETAIL AND SECTIONS

DESIGNED /S/ Jay Bytheway, P.E. CHECKED /S/ Bart Leeflang
DRAWN /S/ Jay Bytheway, P.E. TECH. APPR. /S/ Jay Bytheway, P.E.
JAY BYTHEWAY, P.E.
APPROVED /S/ Scott Rich, P.E.
SCOTT RICH, P.E. - PEER REVIEWER

PROVO, UTAH 2008-5-22 526-418-780

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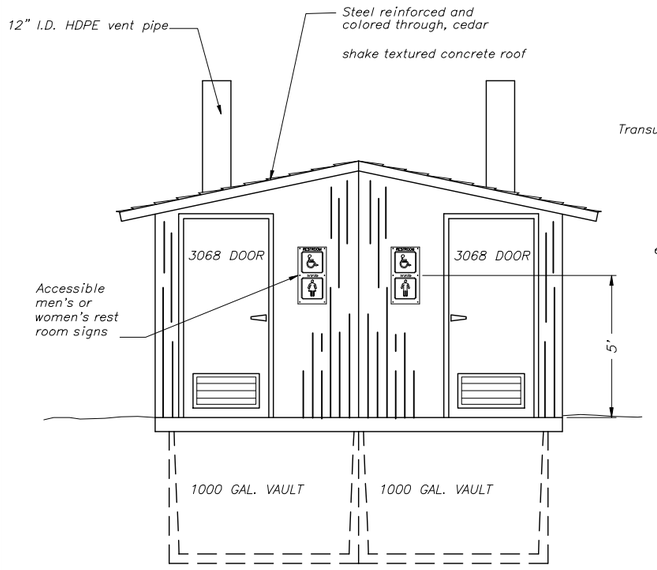
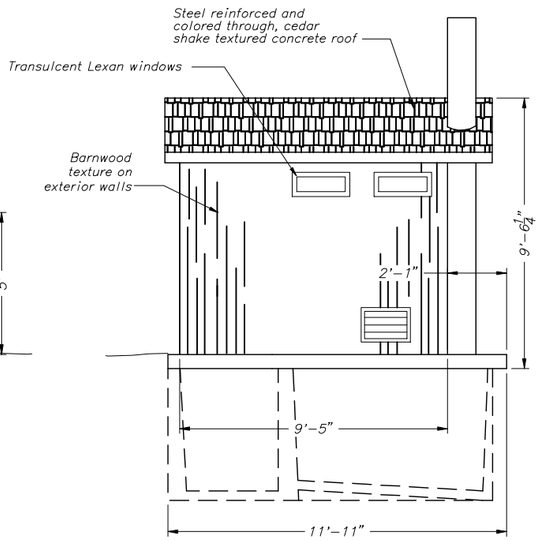
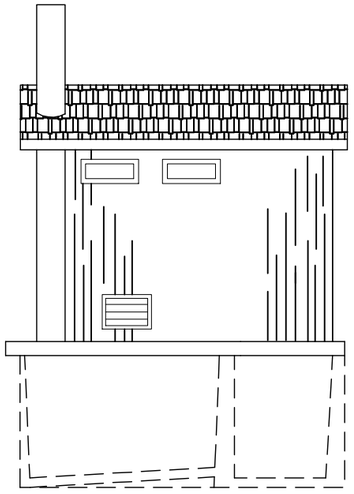


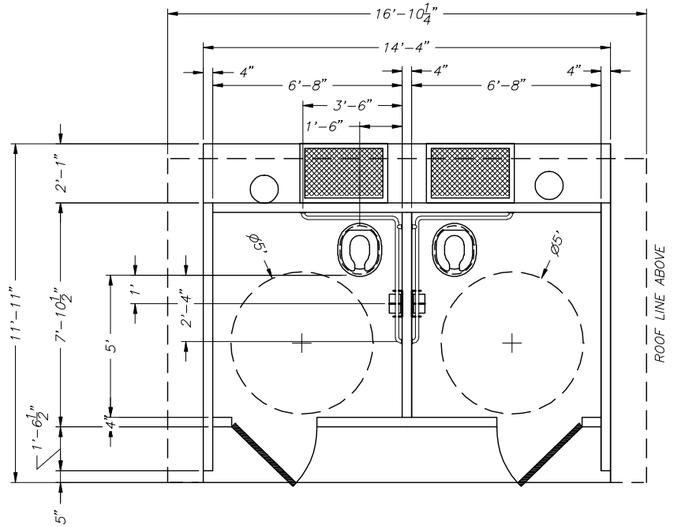
FRONT ELEVATION



RIGHT SIDE ELEVATION

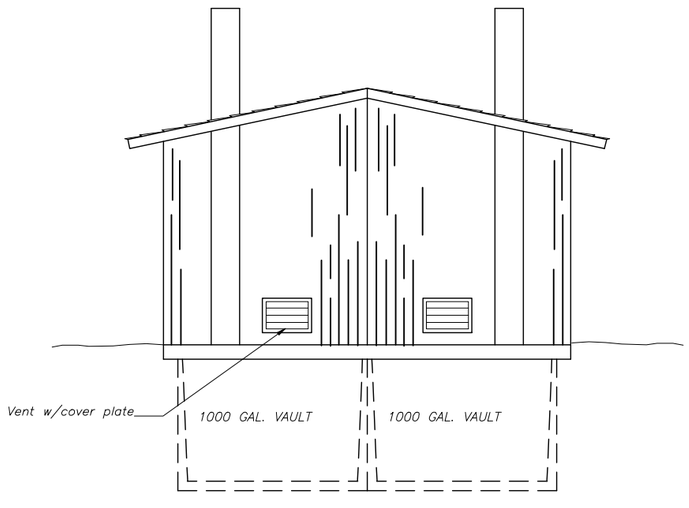


LEFT SIDE ELEVATION

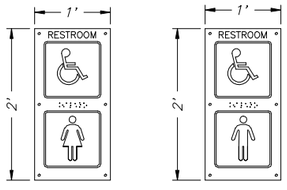


FLOOR PLAN

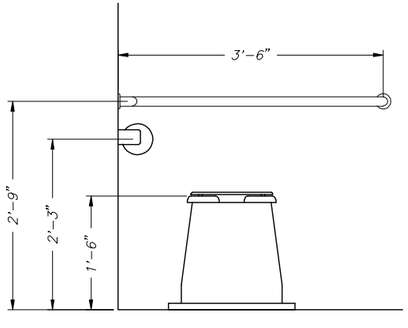
1 0 1 2 3 4 5 6 7 8
SCALE OF FEET



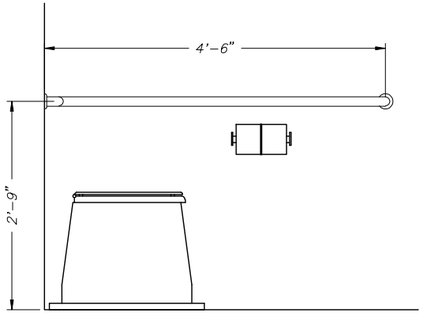
BACK ELEVATION



SIGN DETAIL



REAR WALL OF STALL



SIDE WALL OF STALL

1 0 1 2 3
SCALE OF FEET

NOTES

1. This drawing is provided for information only. The toilet buildings will be furnished and installed by others.
2. Toilet buildings are a manufactured precast product which are assembled in the factory and hauled to the site in two pieces (upper and lower).

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BUREAU OF RECLAMATION
WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK

RECREATION REHABILITATION – PHASE III

SST ACCESSIBLE TOILET BUILDING PLAN AND ELEVATIONS

DESIGNED _/S/ Jay Bytheway_ CHECKED _/S/ David Yates, P.E._
DRAWN _/S/ Jay Bytheway_ TECH. APPR. _/S/ Jay Bytheway, P.E._ JAY BYTHEWAY, P.E.
APPROVED _/S/ Scott Rich, P.E._ SCOTT RICH, P.E. – PEER REVIEWER

PROVO, UTAH 2008-5-22 526-418-781

DATE AND TIME PLOTTED
16-Oct-08 9:14 AM
CUTTER
EMANSEAU

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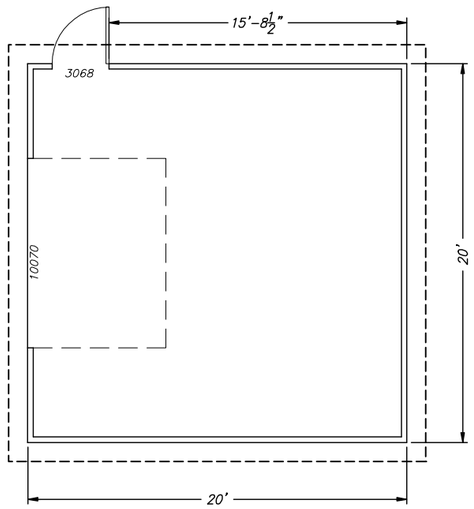
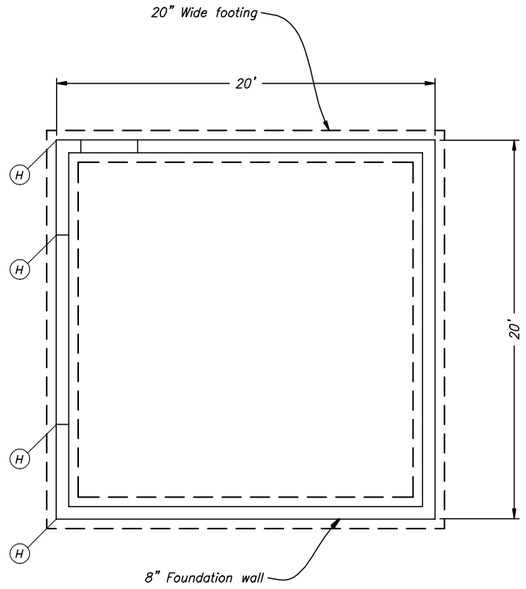


PLAN

SQUARE FOOTAGE = 400



FOUNDATION PLAN

BEAMS AND HEADERS	
BEAM MARK	MEMBER
RB1	2-9.5" LVL's
RB2	2-2x10's

EXPLANATION

(H) Holdown - Simpson STHD10 or equal

(A) Shearwall panel with 8d nails spaced 6 inches on center on the edges and 12 inches on center in the field

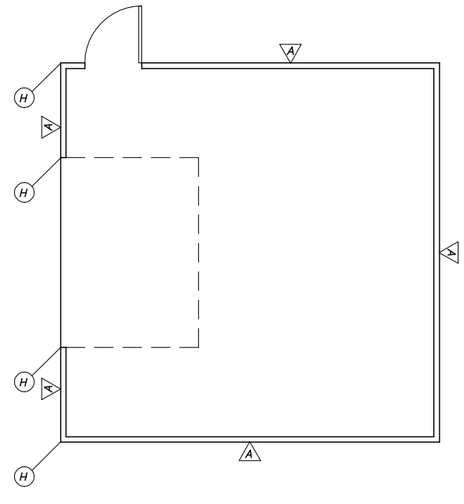
N

ROOF VENTILATION

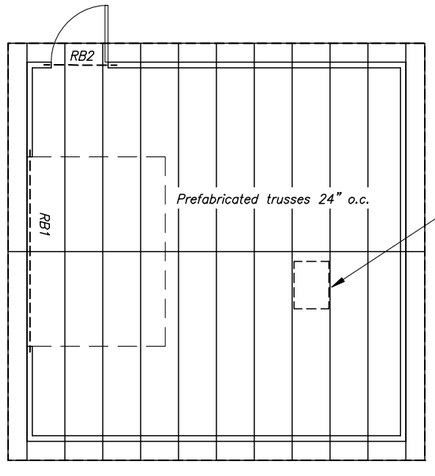
1. Roof area = 22'x22'=484 square feet. Vented area = 1/150 x roof area = 3.23 square feet = 465 square inches. Fifty percent of ventilation will go to turtle vents. Four turtle vents with a NFA of 61 square inches each = 244 square inches. The soffit vents shall have a minimum NFA of 244 square inches and be evenly spaced around the building.

NOTES

1. Construct in accordance with the 2006 IBC.
2. Minor modifications to the plan will be allowed if submitted and approved.



SHEAR WALL PLAN



ROOF FRAMING PLAN

REFERENCE DRAWINGS

BIG ROCK SITE PLAN..... 526-418-740
MAINTENANCE BUILDING-ELEVATIONS..... 526-418-783
MAINTENANCE BUILDING-WALL SECTION..... 526-418-784

1 0 5 10 15
SCALE OF FEET

NOT INCLUDED IN THE CONTRACT
This structure will be constructed by Utah Correctional Industries

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK

RECREATION REHABILITATION - PHASE III

MAINTENANCE BUILDING - PLANS

DESIGNED /S/ Jay Bytheway CHECKED /S/ David Yates, P.E.
DRAWN /S/ Jay Bytheway TECH. APPR. /S/ Jay Bytheway, P.E. JAY BYTHEWAY, P.E.
APPROVED /S/ Scott Rich, P.E. SCOTT RICH, P.E. - PEER REVIEWER

PROVO, UTAH 2008-5-22 526-418-782

DATE AND TIME PLOTTED
15-Oct-08 11:17 AM
PLOTTED BY
EMARSEAU

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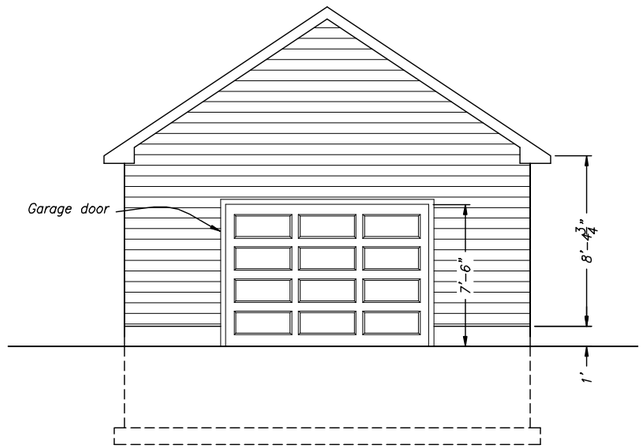

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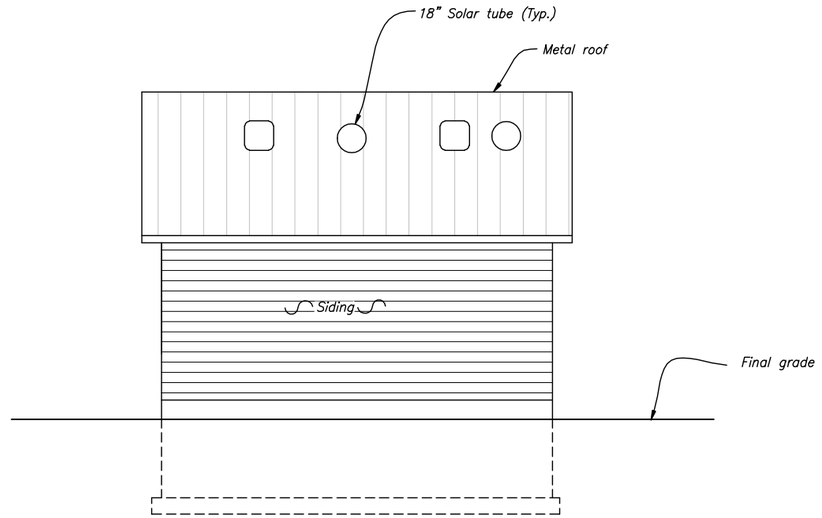

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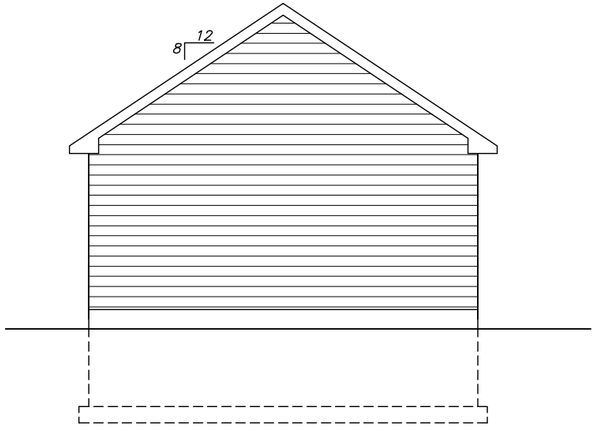
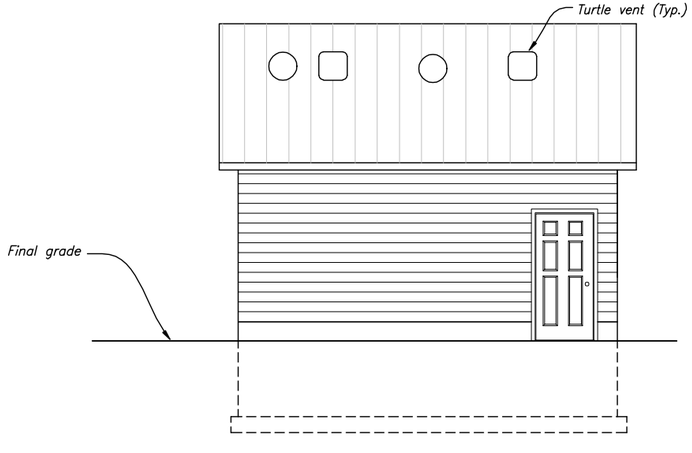


BACK ELEVATION



LEFT ELEVATION

REFERENCE DRAWINGS

BIG ROCK SITE PLAN..... 526-418-740
MAINTENANCE BUILDING-PLANS..... 526-418-782
MAINTENANCE BUILDING-WALL SECTION.....526-418-784

1 0 5 10 15
SCALE OF FEET

NOT INCLUDED IN THE CONTRACT
This structure will be constructed by Utah Correctional Industries

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK

RECREATION REHABILITATION - PHASE III

MAINTENANCE BUILDING - ELEVATIONS

DESIGNED	/S/ Jay Bytheway	CHECKED	/S/ David Yates, P.E.
DRAWN	/S/ Jay Bytheway	TECH. APPR.	/S/ Jay Bytheway, P.E. JAY BYTHEWAY, P.E.
APPROVED			/S/ Scott Rich, P.E. SCOTT RICH, P.E. - PEER REVIEWER
PROVO, UTAH	2008-5-22		526-418-783

DATE AND TIME PLOTTED
15-Oct-08 11:17 AM
PLOTTED BY
EMANSEAU

CAD SYSTEM
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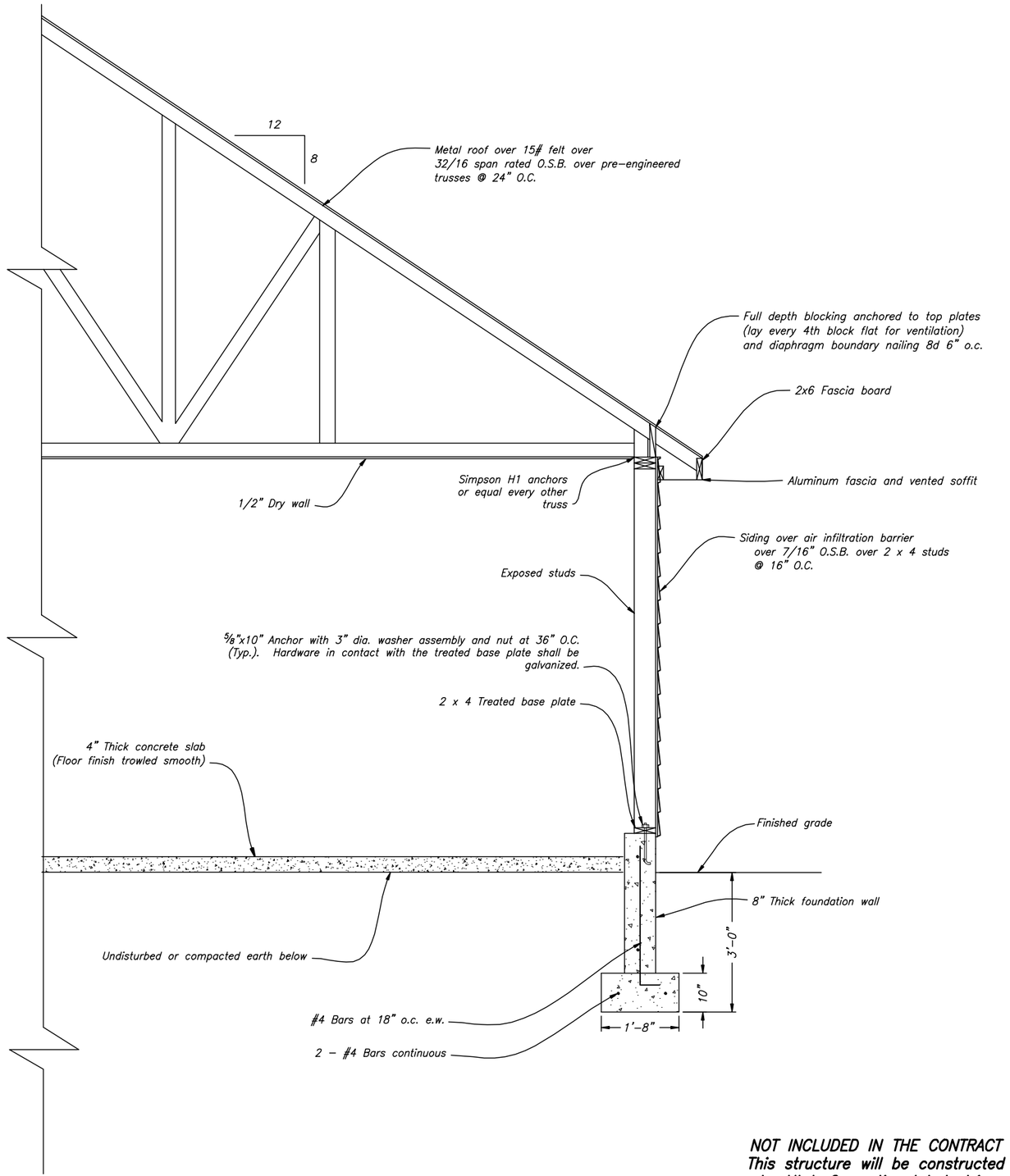

REFERENCE DRAWINGS

BIG ROCK SITE PLAN	526-418-740
MAINTENANCE BUILDING-PLANS	526-418-782
MAINTENANCE BUILDING-ELEVATIONS	526-418-783

1 0 1 2 3 4 5
SCALE OF FEET

NOT INCLUDED IN THE CONTRACT
This structure will be constructed by Utah Correctional Industries

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UNITED STATES
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BUREAU OF RECLAMATION
WEBER BASIN PROJECT
UTAH

EAST CANYON STATE PARK
RECREATION REHABILITATION - PHASE III
MAINTENANCE BUILDING - WALL SECTION

DESIGNED	/S/ Jay Bytheway	CHECKED	/S/ David Yates, P.E.
DRAWN	/S/ Jay Bytheway	TECH. APPR.	/S/ Jay Bytheway, P.E. JAY BYTHEWAY, P.E.
APPROVED	/S/ Scott Rich, P.E. SCOTT RICH, P.E. - PEER REVIEWER		

PROVO, UTAH 2008-5-22 526-418-784

CAD SYSTEM AUTOCAD Rel. 17.1S (LMS TECH)
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PLOTTED BY EMANSEAU

OFFSET LESS THAN 3"

OFFSET 3" TO 6"

NOTE TO DESIGNERS AND DETAILERS: This detail may not be appropriate for tension areas of shallow structural members. If in doubt, use detail for offset greater than 6".

OFFSET GREATER THAN 6"
NONRESTRICTED MEMBER THICKNESS

OFFSET GREATER THAN 6"
RESTRICTED MEMBER THICKNESS

TYPICAL OFFSET DETAILS

NONRESTRICTED MEMBER THICKNESS

RESTRICTED MEMBER THICKNESS

FILLET 1'-0" OR GREATER

FILLET LESS THAN 1'-0"

TYPICAL CORNER DETAILS

RECESS LESS THAN 3" DEEP

RECESS 3" TO 6" DEEP

NOTE TO DESIGNERS AND DETAILERS: This detail may not be appropriate for tension areas of shallow structural members. If in doubt, use detail for recess greater than 6".

RECESS GREATER THAN 6"

TYPICAL BLOCKOUT RECESS DETAILS

(Second stage concrete shown)

$\ell_* = \ell_d$ but not less than 24 inches

SECTION A–A

OPENINGS :

TABLE FOR ADDITIONAL REINFORCEMENT

MEMBER THICKNESS	TIE BARS	EDGE BARS	CORNER BARS
Less than 9"	None	1 – ctr.	2 – #4 ctr.
9" thru 1'-6"	None	2 – (1 ef)	4 – #4 (2 ef)
1'-7" thru 3'-0"	#4 @ 1-0	3 – eq. spc.	4 – #4 (2 ef)
Over 3'-0"	#6 @ 1-0	Spc. @ 1-0	4 – #5 (2 ef)

Omit edge and tie bars along sides of openings where dimension is less than 1'-6".

Omit corner bars at sides of openings adjacent to floors, walls, or beams.

Omit corner bars if both dimensions of opening are less than 1'-6".

RECESSES :

Use corner bars in face of recesses deeper than 4" if either dimension of recess is equal to or greater than 1'-6".

ADDITIONAL REINFORCEMENT AROUND OPENINGS AND RECESSES

GENERAL NOTES 1/

UNLESS OTHERWISE SHOWN ON THE REINFORCEMENT SPECIFICATIONS DRAWINGS, THE DETAILS AND NOTES SHOWN ARE MINIMUM REQUIREMENTS AND TYPICAL FOR ALL REINFORCEMENT DRAWINGS THAT REFER TO THIS DRAWING

ABBREVIATIONS :

bf = bottom face, tf = top face, nf = near face, ff = far face, ef = each face, if = inside face, of = outside face

br = bottom row, tr = top row, nr = near row, fr = far row, er = each row, ir = inside row, or = outside row, mr = middle row

bl = bottom layer, tl = top layer, ml = middle layer, ns = near side, fs = far side, es = each side, ew = each way, ec = each corner

spc. = space or spaces
eq. spc. = equally spaced, equal spaces
d_b = nominal diameter of reinforcing bar
uv = uniformly varying lengths of bars between lengths shown
cl. = clear
ctr. = center or centers
add'l = additional
ℓ_d = development length

SYMBOLS :

Bars shown thus #8@1-0 or #6@8 indicate a group of the same size bars equally spaced.

An open circle at the end of a bar indicates a bend with the bar turned away from the observer.

A closed circle at the end of a bar indicates a bend with the bar turned towards the observer.

Splices shown thus indicate a lap splice, not a bend in the bar.

Mechanical splice

DIMENSIONS :

Dimensions are to the centerline of the bars except for embedment of hooks, which are dimensioned to the outside of the bar.

Clear cover dimensions are marked "cl." and are dimensioned to the outside of the bar.

COVER :

Place the reinforcement so that the clear distance between face of concrete and nearest reinforcement is 1½" for #5 bars and smaller, 2" for #6 bars through #8 bars and 3" for #9 bars through #11 bars. Provide 3" clear distance from face of concrete for all bars when the concrete is placed against earth or rock. Clear distance is to the design dimension line.

Reinforcement parallel to construction joints shall have a minimum of 2" clear cover.

PLACING :

Reinforcement at small openings (max 1'-6") in walls and slabs may be spread apart not more than 1.50 times the bar spacing.

Reinforcement shall be adjusted laterally to maintain a clear distance of at least 1" between the reinforcement and keys, waterstops, anchor bolts, form ties, conduits, and other embedded materials. In heavily reinforced areas, relocation of the embedded material or cutting of reinforcement must be approved.

When bars are bent due to offsets less than 3" and recesses less than 3" deep, the slope of the inclined portion must not exceed 6 to 1.

Reinforcement parallel to anchor bolts or other embedded material shall be placed to maintain a clear distance of at least 1.33 times the maximum size aggregate.

SPACING :

The first and last bars in walls and slabs, stirrups in beams, and ties in columns are to start and end at a maximum of one half of the adjacent bar spacing. The minimum edge spacing shall be the smaller of either $2.5d_b$ or 0.5 of the adjacent bar spacing. For #9 through #11 bars where minimum centerline bar spacing is 6" and the lap splice lengths requiring staggered placement shown in Tables 3–60 and 4–60 are used, the minimum edge spacing shall be 3".

ACCESSORIES :

Bar supports, spacers, and other accessories are not shown on the design drawings. The recommendations of the ACI Detailing Manual–2004 (SP–66), or other approved supporting systems may be used.

DRAWING REFERENCES :

Numerals in parentheses ( ) following notes and section letters or numbers indicate the number of the drawing upon which the section or detail is shown; for example (524) denotes Drawing No. 557–D–524.

STANDARD HOOKS :

1. 180–degree bend plus $4d_b$ extension, but not less than 2½" at the free end of the bar.
2. 90–degree bend plus $12d_b$ extension at free end of the bar.

STIRRUP AND TIE HOOKS :

1. #5 bar and smaller, 90–degree bend plus $6d_b$ extension at the free end of the bar.
2. #6, #7, and #8 bars, 90–degree bend plus $12d_b$ extension at the free end of the bar.
3. #8 bars and smaller, 135–degree bend plus $6d_b$ extension at the free end of the bar.

TABLE OF PIN DIAMETERS IN INCHES

BAR NO.	3	4	5	6	7	8	9	10	11
Standard bends	2¼	3	3¾	4½	5¼	6	9½	10¾	12
Stirrup and tie bends	1½	2	2½	4½	5¼	6			

REINFORCEMENT DOWELS :

Dowels indicated on the drawing, such as #8(d), shall be embedded a length equal to ℓ_d and shall have a projection equal to that required for lap splicing to a bar of the same diameter.

PLAIN DOWELS :

Plain dowels across contraction joints shall be smooth bars uniformly coated with a film of oil before concrete placement. Viscosity of the oil shall have a SAE rating of not less than 250.

CODE AND DETAILING REFERENCES :

ACI Building Code Requirements for Structural Concrete (ACI 318–05).
ACI Detailing Manual – 2004 (SP–66)

NOTES TO DESIGNERS AND DETAILERS :

Splice lengths shown in the tables on this drawing are for Class B tension lap splices in accordance with ACI 318–05. Assumed conditions for these tables in addition to the requirements shown on this drawing are uncoated reinforcement, normal weight concrete, and the transverse reinforcement index (K_{tr}) equal to zero. Splices or development lengths other than those shown in the tables must be detailed on the reinforcement specifications drawings.

Some factors which require additional consideration are: Beams or columns with ties, lightweight aggregate concrete, epoxy–coated reinforcement, excess reinforcement, bars in compression, bundled bars, and special seismic provisions per ACI 318–05 (Chapter 21 – Special Provisions For Seismic Design).

The centerline to centerline spacing requirements shown in TABLES 3–60 and 4–60 shall not be used when using crack control criteria for beams and one–way slabs described in ACI 318–05, Section 10.6.4. The spacing requirements shall be calculated using Eq. 10–4.

Recalculation of lap splice lengths and development lengths may be required for changes in combinations of controlling variables per ACI 318–05, Section 12.2.

Lap splices and development lengths for horizontal bars in walls are designated as top bar splices and development lengths unless otherwise noted or detailed on the reinforcement specifications drawings.

Development lengths for deformed bars in tension terminating in a standard hook shall be calculated in accordance with ACI 318–05, Section 12.5. In cases where a restricted member thickness does not allow for the full development length, the designer shall use a reduced tensile capacity

SPLICES :

The minimum length of lap for splicing parallel bars shall be as given in TABLES 3–60 and 4–60.
Staggered splices shall be separated to give 12 inches clear between ends of adjacent splices.
Bars spliced by noncontact lap splices shall not be spaced transversely farther apart than one–fifth the required lap splice length, nor 6" on centers.
When reinforcing bars of different size are to be spliced, the length of lap shall be governed by the smaller diameter bar.
Splices are to be made so that the required clear distances to face of concrete will be maintained.

f'c = 3000 psi — TABLE 3 – 60 — fy = 60,000 psi

Bar size No. *** IP (SM)	MINIMUM ℄ to ℄ BAR SPACING (INCHES)	LAP SPLICE LENGTH (INCHES)		DEVELOPMENT LENGTH ℓ_d (INCHES)	
		TOP BARS *	OTHER BARS	TOP BARS *	OTHER BARS
3 (10)	3	17	16	13	12
4 (13)	3	23	18	18	14
5 (16)	4	28	22	22	17
6 (19)	5	34	26	26	20
7 (22)	6	49	38	38	29
8 (25)	6	56	43	43	33
9 (29)	7	63	49	49	38
10 (32)	8	71	55	55	42
11 (36)	9	79	61	61	47
9 (29)	6	63 **	49 **	49	38
10 (32)	6	75 **	58 **	58	45
11 (36)	6	93 **	71 **	71	55

f'c = 4000 psi — TABLE 4 – 60 — fy = 60,000 psi

Bar size No. *** IP (SM)	MINIMUM ℄ to ℄ BAR SPACING (INCHES)	LAP SPLICE LENGTH (INCHES)		DEVELOPMENT LENGTH ℓ_d (INCHES)	
		TOP BARS *	OTHER BARS	TOP BARS *	OTHER BARS
3 (10)	3	16	16	12	12
4 (13)	3	20	16	15	12
5 (16)	4	25	19	19	15
6 (19)	5	29	23	23	18
7 (22)	6	43	33	33	25
8 (25)	6	49	37	37	29
9 (29)	7	55	42	42	33
10 (32)	8	62	47	47	37
11 (36)	9	68	53	53	41
9 (29)	6	55 **	42 **	42	33
10 (32)	6	65 **	50 **	50	39
11 (36)	6	80 **	62 **	62	48

TABLES 3–60 and 4–60 generated using ACI 318–05 Eq. 12–1

* Top bars are all horizontal bars so placed that more than 12 inches of fresh concrete is cast below the development length or splice. (See NOTES TO DESIGNERS AND DETAILERS)

** Splices must be staggered.

*** IP = Inch–Pound Bar Size Designation.
SM = Soft Metric Bar Size Designation.

1/ Unless otherwise shown on the reinforcement specifications drawings or this drawing, follow the recommendations established by the ACI Detailing Manual – 2004 (SP–66).

7–23–07 D – AIB, P.E.	REVISED TO CONFORM TO ACI 318–05. ADDED THREE NOTES TO NOTES TO DESIGNERS AND DETAILERS. OTHER MINOR REVISIONS
6–1–03 D – AIB, PE	REVISED TO CONFORM TO ACI 318–99. REVISED SYMBOLS, SPACING, NOTES TO DESIGNERS AND DETAILERS. ADDED SOFT METRIC BAR SIZES IN. TABLES. MINOR REVISIONS.
6–1–97 D – GPG	CONVERTED TO AUTOCADD DRAWING. REVISED TO CONFORM TO ACI 318–95. OTHER MINOR REVISIONS.
2–29–92 D – R.O.A.	TOP BAR DEFINITION REVISED AND MINOR PUNCTUATION REVISION IN PLACING NOTE.
12–7–90 D – J.D.S.	REDRAWN TO NEW DRAFTING STANDARDS. REVISED CONCRETE COVER, NOTES TO DESIGNERS, TABLES, REINFORCEMENT AROUND OPENINGS, AND OTHER MINOR REVISIONS. REVISED TO CONFORM TO ACI 318–89.
9–27–84 D – NFP DG	REVISED PIN DIAMETER TABLE, REFERENCED THE ACI DETAILING MANUAL 1980, ADDED NOTES UNDER PLACING AND STANDARD HOOKS.
12–8–76 D – WRW	MINOR REVISIONS

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
STANDARD DESIGNS

GENERAL NOTES AND MINIMUM REQUIREMENTS FOR DETAILING REINFORCEMENT

DESIGNED M. F. WARD J. G. STARBUCK — TECHNICAL APPROVAL E. D. MORGAN
DRAWN M. CAMPBELL — SUBMITTED JACK W. HILF
CHECKED GAYLE A. ERICKSON — APPROVED H. G. ARTHUR, ACTING DIRECTOR, DESIGN AND CONSTRUCTION

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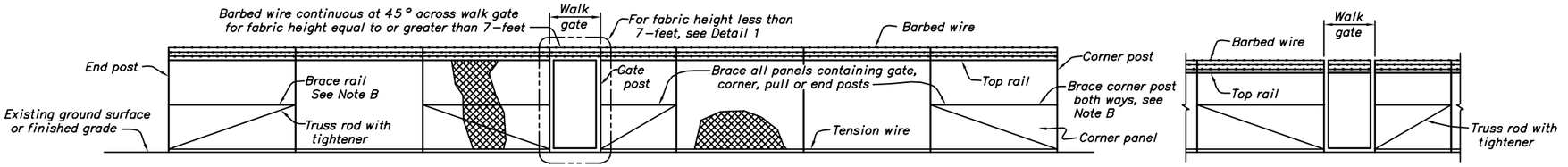
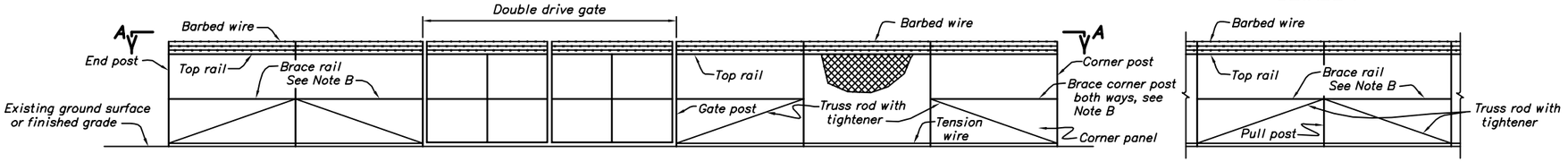


TYPICAL ELEVATION

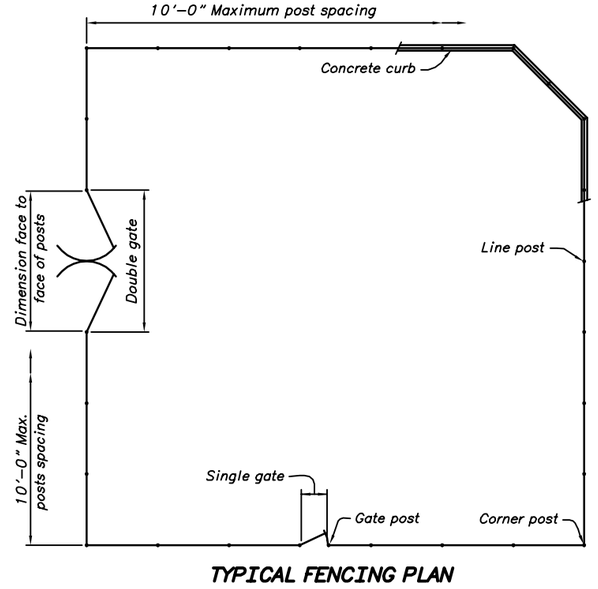
DETAIL 1



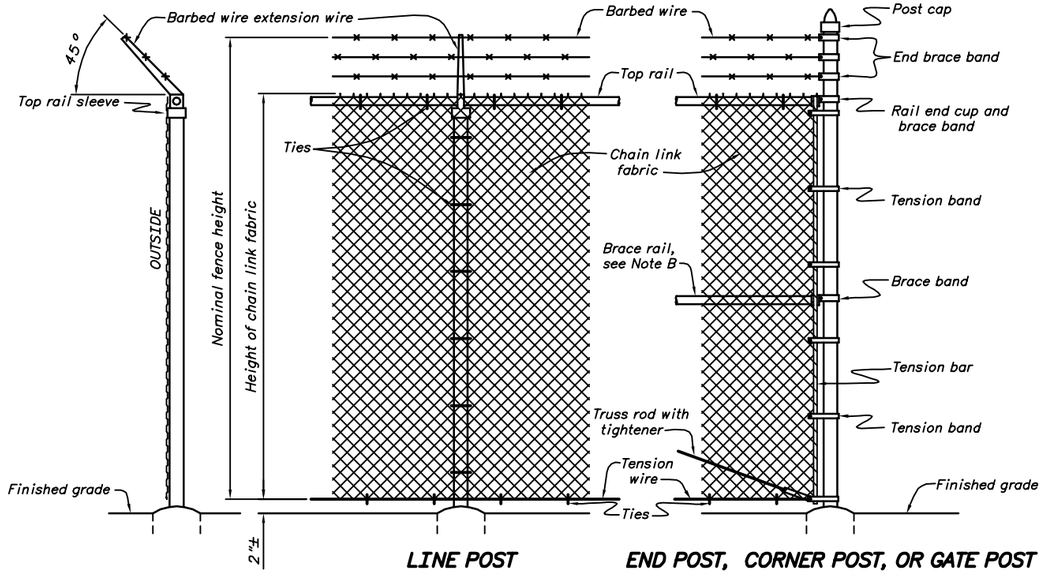
TYPICAL ELEVATION

PANELS ADJOINING PULL POST

VIEW A-A

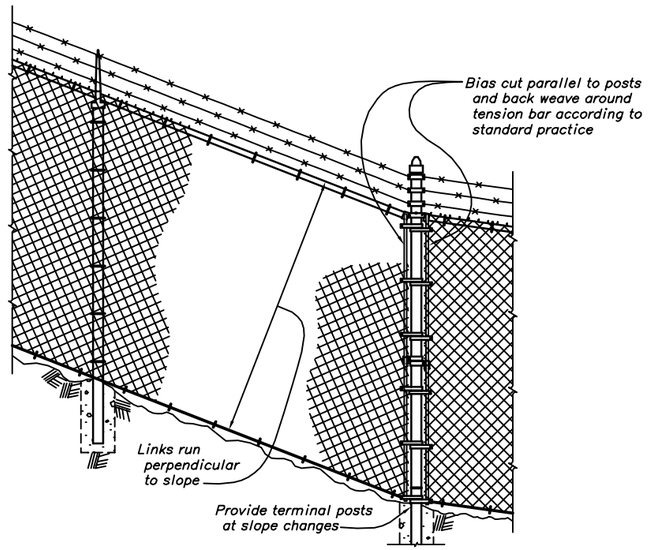


TYPICAL FENCING PLAN

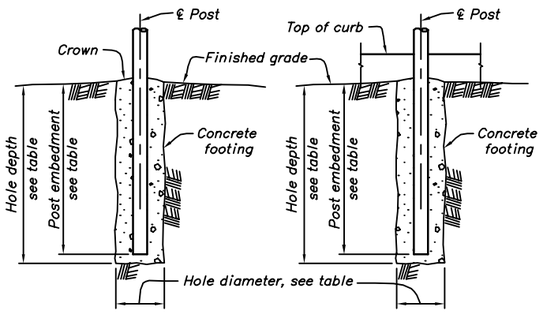


LINE POST

END POST, CORNER POST, OR GATE POST

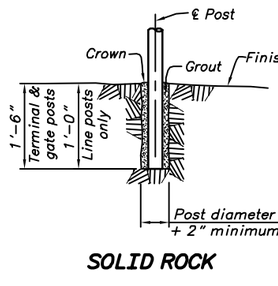


FENCE INSTALLATION ON STEEP SLOPES

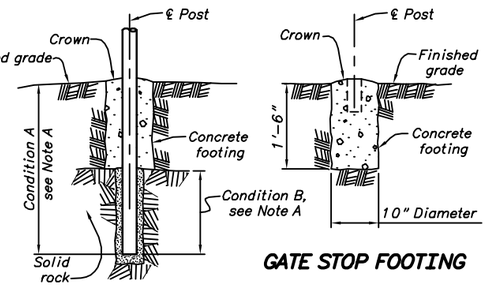


SOIL OR LOOSE ROCK

POST FOOTING UNDER CURB



SOLID ROCK



GATE STOP FOOTING

POST FOOTING IN SOLID ROCK WITH OVERBURDEN OF SOIL OR LOOSE ROCK

POST FOOTING SIZES IN SOIL OR LOOSE ROCK				
POST	FABRIC HEIGHT OR GATE LEAF WIDTH	HOLE DIAMETER	HOLE DEPTH	POST EMBEDMENT
Line	3 ft. to 4 ft.	6 inches	24 inches	22 inches
Line	5 ft.	8 inches	30 inches	28 inches
Line	6 ft. to 12 ft.	9 inches	38 inches	36 inches
Terminal	3 ft. to 5 ft.	10 inches	32 inches	30 inches
Terminal	6 ft. to 12 ft.	12 inches	38 inches	36 inches
Gate	≦ 6 ft.	12 inches	38 inches	36 inches
Gate	6 ft. to 13 ft.	16 inches	44 inches	42 inches
Gate	> 13 ft.	26 inches	50 inches	48 inches

Condition A: Depth required for footing in soil or loose rock.
Condition B: Depth required for embedment in rock.
Note A: Satisfy the minimum requirements for Condition A or Condition B.
Note B: Brace rails and truss rods are not required for fabric height of 6 feet or less.

NOTES

See specfic site plan for overall fence dimensions and size, location and swing of gates.

Install pull posts at the end of each run, at maximum intervals of 500 feet, and at vertical and horizontal changes in alignment greater than 30 degrees.

Weld all joints between tubular gate frame members or use heavy fittings to provide rigid and watertight connections.

Gate dimensions are face to face of gate posts.

Provide latches, stops and keepers for all gates as specified.

End post, corner posts, and pull posts, are designated as terminal posts.

See site plans for curb details and locations where curb is required.

Chain link fabric shall be attached to fence framework in accordance with the Chain Link Fence Manufacturer's Institute (CLFMI) Product Manual.

Chain link fences are 6 foot high fabric unless otherwise noted on specific site plans.

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STANDARD DESIGN

CHAIN LINK FENCING

CHAIN LINK FENCING REQUIREMENTS SOIL INSTALLATION

DESIGNED G E SHERARD TECH. APPR.
DRAWN DL BORING
CHECKED T C GRABER APPROVED
STRUCTURAL AND ARCHITECTURAL GROUP

CADD SYSTEM	CADD FILENAME	DATE AND TIME PLOTTED
AutoCAD Rel. 15.05	40-D-7016.DWG	NOVEMBER 20, 2001 11:57
DENVER, COLORADO	MAY 1, 1999	40-D-7016

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