CITY OF FLAGSTAFF

EXHIBIT D

FLAGSTAFF URBAN TRAIL SYSTEM - SWITZER CANYON TRAIL
E. TERRACE AVE. TO N. SWITZER CANYON DR.

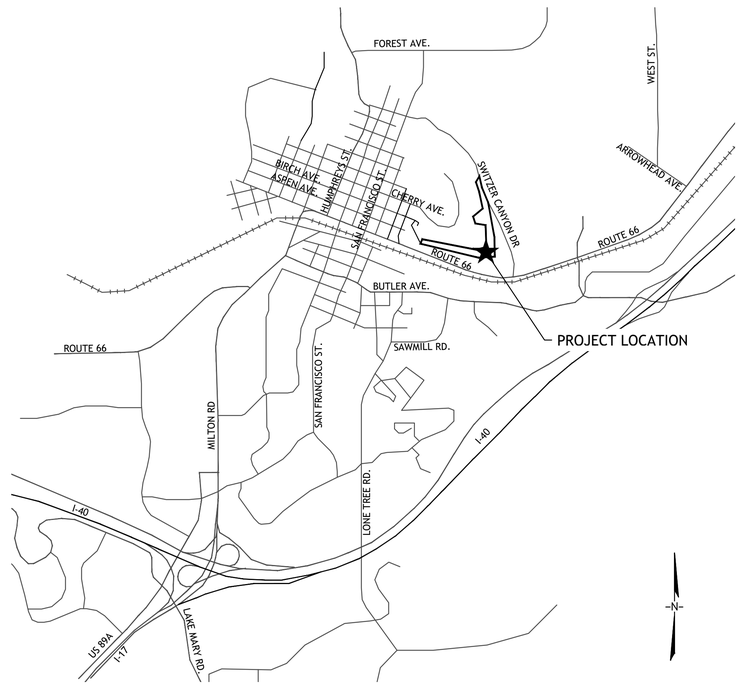
COF PROJECT NO. 03-16013 & ST3023

CIVIL IMPROVEMENTS SHEET INDEX

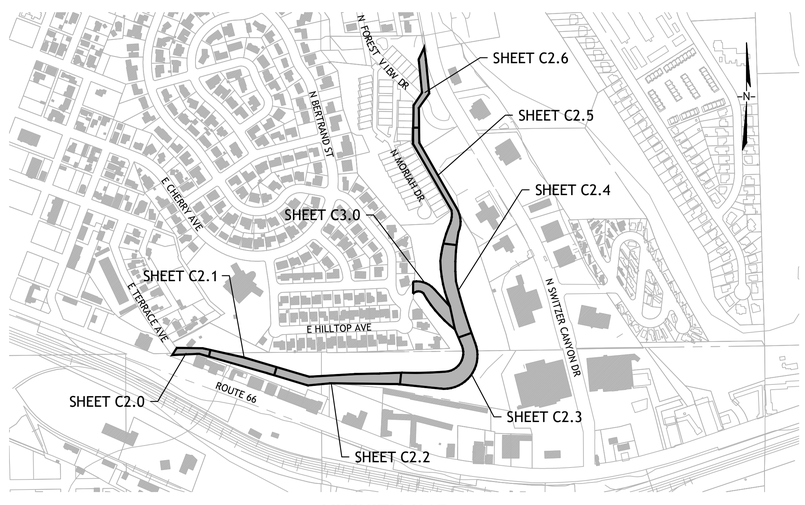
C1.0	COVER SHEET
C1.1	NOTES SHEET
C1.2 - C1.3	DETAILS
C2.0	PLAN & PROFILE - STA 10+00 TO 12+40
C2.1	PLAN & PROFILE - STA 10+00 TO 17+00
C2.2	PLAN & PROFILE - STA 17+00 TO 24+00
C2.3	PLAN & PROFILE - STA 24+00 TO 31+00
C2.4	PLAN & PROFILE - STA 31+00 TO 38+00
C2.5	PLAN & PROFILE - STA 38+00 TO 45+00
C2.6	PLAN & PROFILE - STA 45+00 TO 50+23.63
C3.0	BID ADD 1 - HILLTOP FEEDER PLAN & PROFILE - STA 1+00 TO 4+62
SD1.0 - SD1.1	DRAINAGE IMPROVEMENTS
C4.0	CONTROL
C5.0-C5.1	TREE REMOVAL
C6.0-C6.3	EROSION CONTROL PLAN
S1-S4	STRUCTURAL PLANS

IMPERVIOUS AREA

PROPOSED IMPERVIOUS AREA: 18,640 SF (INCLUDES BID ADD 1)
TOTAL IMPERVIOUS AREA: 18,640 SF (INCLUDES BID ADD 1)



AREA MAP
N.T.S.



VICINITY MAP
N.T.S.

CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE 2025 REVISION TO THE 2020 MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) STANDARD SPECIFICATIONS AND DETAILS AND CITY OF FLAGSTAFF ADDENDUM TO MAG SPECIFICATIONS AND DETAILS.

OWNER
CITY OF FLAGSTAFF
211 W. Aspen Ave.
Flagstaff, AZ 86001
Contact: Alec Latino, Project Manager
Phone: (928) 213-2677

CIVIL ENGINEER
Peak Engineering,Inc.
201 E. Birch Ave. Suite 3
Flagstaff, AZ 86001
Contact: Thomas E. Smith, P.E.
Phone: (928) 774-4046

STRUCTURAL ENGINEER
Hubbard Merrell Engineering,Inc.
1623 N 1st. Street
Flagstaff, AZ 86004
Contact: Dave Merrrell, P.E.
Phone: (928) 526-6174

CITY OF FLAGSTAFF APPROVALS
THE CITY OF FLAGSTAFF APPROVES THESE PLANS FOR CONCEPT ONLY AND SHALL NOT BE LIABLE FOR ERRORS OR OMISSIONS OF THE DESIGN ENGINEER.

City Engineer — DATE

City Public Works Director — DATE

Water Services Director — DATE

UTILITY ACKNOWLEDGEMENTS

Approval Letter on file — 06/28/2018 (Resubmitted January 2025)
LUMEN - Jason Dale — DATE
No apparent conflict.

Approval Letter on file — 01/17/2025
UniSource Energy - Martin Conboy — DATE

Approval Letter on file — 01/21/2025
APS - Brady Horn — DATE
APS uderground wires in the same proposed path of Sheet C2.6, C2.5, and C2.0. APS overhead wires in Sheet C2.3, C2.2, C2.1, and C2.0. Please follow proper safety practices for digging in underground areas, and tall vehicles and equipment in overhead areas.

Approval Letter on file — 01/16/2025
ALTICE/OPTIMUM - Jason Quinlan — DATE
Suddenlink will reattach to the new pole placement, when APS installs or relocate poles.

FINAL PLANS

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

REVISION	DESCRIPTION	DATE

201 E Birch Ave. Suite 3
Flagstaff, AZ 86001
(928) 774-4046
Peak ENGINEERING, INC.
Connecting Place to People

REGISTERED PROFESSIONAL ENGINEER (CIVIL) ARIZONA U.S.A. 42777 THOMAS E. SMITH Date Signed 3/14/25

CITY OF FLAGSTAFF
FUTS - SWITZER CANYON TRAIL
COVER

COF PROJECT NO. 03-16013 & ST3023 | PZ-23-00058

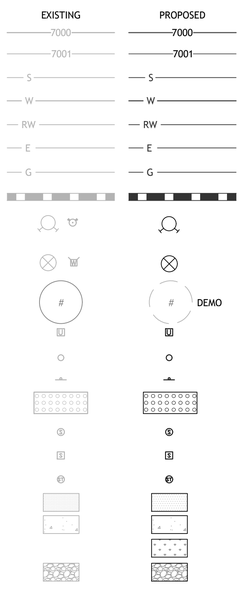
JOB NO: 16COF03/22COF03 | BY: CAL/DCW
DATE: MARCH 2025 | CHECKED: TES

C1.0

ABBREVIATIONS

AC	ASPHALTIC CONCRETE PAVEMENT
ACP	ASBESTOS CEMENT PIPE
ADOT	ARIZONA DEPARTMENT OF TRANSPORTATION
APN	ASSESSORS PARCEL NUMBER
BC	TOP BACK OF CURB
BO	BLOW-OFF
BP	BEGIN POINT ALIGNMENT
BR	BOTTOM OF RAMP
BS	BOTTOM OF STAIR
BW	BOTTOM OF WALL
C&G	CURB & GUTTER
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
COF	CITY OF FLAGSTAFF
COMM	COMMERCIAL
D/W	DRIVEWAY
E	EASTING
EG	EXISTING GRADE
EL - ELEV	ELEVATION
EP	END POINT ALIGNMENT
EX	EXISTING
FC	FACE OF CURB
FFE	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE
GB	GRADE BREAK
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
LEN	LENGTH
LT - L	LEFT
MAG	MARICOPA ASSOCIATION OF GOVERNMENTS
MAX	MAXIMUM
ME	MATCH EXISTING
MIN	MINIMUM
MP	MID POINT (CURVE)
N	NORTHING
NA	NOT APPLICABLE
OFS	OFFSET
PC	POINT OF CURVATURE
PCC	PORTLAND CEMENT CONCRETE or POINT OF COMPOUND CURVATURE
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
RAD - R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RES	RESIDENTIAL
ROW - R/W	RIGHT OF WAY
RT - R	RIGHT
S	SIGN
SD	STORM DRAIN
SRP	SPIRAL RIBBED PIPE
SS	SANITARY SEWER
STA	STATION
SW	SIDEWALK
TC	TOP OF CURB
TR	TOP OF RAMP
TS	TOP OF STAIR
TW	TOP OF WALL
WL	WATER LINE
WM	WATER METER
WV	WATER VALVE

LEGEND



ENGINEER'S GENERAL NOTES

The work shall be done in accordance with the most current edition(s) of the following specifications and these plans. In the case of conflict, the following order of precedence shall govern:

- Construction Plans and Addenda
- Special Provisions
- General Provisions and City of Flagstaff revisions to the Maricopa Association of Governments (MAG) Specifications & Details
- City of Flagstaff (COF) Standards & Specifications
- Current Edition of the MAG Standards and Specifications
- Arizona Department of Transportation (ADOT) Standards and Specifications
- Federal Highway Administration (FHWA) Manual of Uniform Traffic Control Devices

It is the Contractor's responsibility to obtain copies of the above Standards, Specifications and Details as well as all other standards and specifications referenced by or necessary for interpreting these plans.
The Contractor is not relieved of responsibility for making complete and accurate on-site determinations of the locations of all utilities, structures and field conditions, which may affect the progress of the work.

PERMITS. The Contractor is responsible for determining what permits are required for the work and obtaining, at his own expense, the permits required unless otherwise noted in the Special Provisions.
Permitting includes compliance with the Arizona Department of Environmental Quality (ADEQ) Arizona Pollutant Discharge Elimination System (AZPDES) Construction General Permit. The Contractor is responsible for filing a Notice of Intent (NOI) and Notice of Termination (NOT) in accordance with AZPDES requirements.

UTILITIES. Underground utilities shown are approximate and were determined from field measurements, construction plans, record plans, or utility maps furnished by others. The Contractor is responsible for determining the actual locations of all underground lines that may affect the work.
The Contractor is responsible for notifying appropriate utility companies prior to construction commencing. The number to call is 811. The Contractor shall allow 2 working days after Blue Stake is notified before starting any excavation work in the proximity of buried utilities.
Where the plans call for connecting new structures to existing underground pipes or structures, the Contractor is responsible for determining the exact sizes, types and locations of existing underground improvements and furnishing the materials necessary for making the required connections.
At least 48 hours prior notice is required before disrupting utility service to make connections. The notice must include the exact time of disruption and the expected duration of loss of service.

QUANTITIES. The quantities shown are approximate and do not necessarily reflect bid schedule items. The Contractor is responsible for independently estimating work quantities prior to bidding. Payment will be based on bid schedule items.

TRAFFIC CONTROL. The Contractor is responsible for providing any necessary traffic control devices for vehicle, bicycle and pedestrian traffic affected by the construction.

STORMWATER MANAGEMENT. Adequate drainage, erosion and sediment control measures, best management practices (BMPs), and/or other stormwater management facilities shall be provided and maintained at all times during construction. The Contractor is responsible for damages to adjacent property and/or the construction site caused by his or her failure to provide and maintain adequate drainage and erosion/sediment control for the construction area.

Refer to the AZPDES Construction Activity General Permit and ADEQ website for guidance, BMPs and reporting requirements: http://www.azdeq.gov/node/524

CITY OF FLAGSTAFF GENERAL NOTES

1. Approval of these plans by the City Engineer is for a one year period, subsequent to the date of approval. If construction work is not started within the one (1) year period, or has been discontinued for any reason for longer than one (1) year, the plans shall be resubmitted for review and re-approval.

2. Plan review by the City does not extend to material quantities shown on the plans.

3. A public works permit, issued by the City, is required for all work in City rights-of-way or easements and for construction of any improvements intended to become public property.

4. The City shall be notified twenty-four (24) hours prior to beginning different phases of construction so that City Inspectors may be scheduled.

5. All materials and workmanship shall comply with Title 13, Engineering Design Standards and Specifications for New Infrastructure, current "MAG Uniform Standard Specifications and Details for Public Works Construction,"the City of Flagstaff Stormwater Design Manual, and with generally accepted engineering design and construction practice. All work and materials, which do not conform to the standards and specifications, are subject to removal and replacement at the contractor's expense. The contractor is responsible for reviewing Chapter 13-21, which makes minor modifications to certain MAG Specifications and details.

6. Any work performed without the knowledge and approval of the City Engineer or his authorized representative is subject to removal and replacement at the contractor's expense.

7. The City Engineer or his authorized representative may suspend the work by written notice when, in his judgment, progress is unsatisfactory, work being done is unauthorized or defective, weather conditions are unsuitable, or there is danger to the public health or safety.

8. The City Engineer may order any or all materials used in the work to be tested according to the American Association of State Highway and Transportation Officials (AASHTO) and the American Society for Testing and Materials (ASTM) Standards. The Contractor shall, at his expense, supply all samples required for testing.

9. Access that meets Section 13-13-004-0001, Fire Access, shall be in place and approved before and at all times during onsite combustible construction and/or prior to issuance of building permits in new subdivisions. Fire Department and Engineering Section approval is required for obstruction of access or water system shutdown.

10. The contractor shall be responsible for maintenance of the streets and of partially completed portions of the work until final acceptance of the work. The contractor shall submit to the City Engineer for approval a construction schedule for any streets required to be closed or partially closed for the construction activity. The contractor shall reopen the streets no later than the opening date shown on the construction schedule or upon order of the City Engineer. The regulation and control of construction traffic shall be as directed by the City Engineer or his authorized representative.

11. Approval of a portion of the work in progress does not guarantee its final acceptance. Testing and evaluation may continue until written final acceptance of a complete workable unit. Any defects which appear in the work within one (1) year from the date of acceptance and which are due to improper workmanship or inferior materials supplied shall be corrected by or at the expense of the owner/developer or the contractor.

12. Acceptance of completed public improvements will not be given until defective or unauthorized work is removed, and final clean-up is complete.

13. Location of underground utilities before work is begun is to be accomplished in accordance with A.R.S. Section 40-360.22.

14. If work is done on private property in relation to a project constructed under these standards, the contractor will provide the City with written authorization from the property owner to do so.

15. The establishment and use of temporary construction yards shall conform to the current City zoning code standards for temporary uses.

16. All excavated material shall be disposed of in accordance with applicable City codes and regulations. The contractor shall obtain all required City approvals and permits as deemed necessary by the City to dispose of excavated material.

17. All construction staking shall be the responsibility of the contractor/developer and performed under the direct supervision of a registered land surveyor or civil engineer.

18. All traffic sign sheeting shall be Type VIII as designed by ASTM D4956-07e1 Standard Specifications for Retroreflective Sheeting for Traffic Control, unless specified otherwise on the construction plans.

19. When the construction plans specify graffiti control on bridges or other structures, the contractor shall seal the structure first using Monochem Aquaseal ME 12 and then apply Monochem Permashield, Sacrificial Graffiti Control System (or approved equal).

20. All areas disturbed during construction shall be stabilized and reseeded in accordance with Chapter 13-17. In the event that the construction activity disturbs more than one (1) acre, a stormwater pollution prevention plan (SWPPP) shall be prepared in order to obtain a construction general permit from ADEQ.

21. All survey monuments within or around the construction area shall be protected in place. Any monuments that are disturbed by construction shall be reset by the RLS at the contractor's expense in accordance with City of Flagstaff Engineering Standards section 13-03-005-0004 and A.R.S. 33-103.

CITY OF FLAGSTAFF PAVING NOTES

A. Exact point of matching termination and overlay, if necessary, shall be determined in the field by the City Engineer or his authorized representative. When a longitudinal joint associated with a trench path, pavement matchup or other occurs on a street that includes a bike lane, the joint shall be located outside the bike lane.
B. No job will be considered complete until:
   1. All curbs, pavements, sidewalks, catch basins, storm drains, and manholes have been cleaned of all dirt and debris;
   2. Survey monuments are installed and stamped; and
   3. All frames, covers, and valve boxes are adjusted to grade.
C. No paving construction shall be started until all utility lines are completed and approved under proposed paved areas.
D. Base course will not be placed until subgrade has been approved by the City Engineer or his authorized representative.
E. The location of all water valves, fire hydrants, and manholes must at all times during construction be referenced and made accessible to the City.
F. Utility facilities in conflict with this work will be relocated by the permittee or the utility owner. This activity shall be coordinated with the owner of the utility to prevent any unnecessary interruption of service to existing customers.
G. Existing street name signs, traffic signs and devices associated with the project shall be maintained during construction and relocated by the contractor as shown on the approved plans.
H. Any changes or additions to pavement markings caused by pavement overlay, chip seal, or installation of underground facilities shall be shown on the approved plans.
I. On projects where the contractor causes excessive damage to an existing paved street or there are multiple street cuts (maximum of four (4) in five hundred (500) feet) an asphalt overlay shall be required.
J. A prime coat is not required unless so specified in the soils and pavement report and/or shown on the plans.
K. All curb and gutter, sidewalk, driveways, and sidewalk ramps shall be constructed on a minimum three (3) inches of aggregate base course (ABC). The ABC shall be constructed in accordance with MAG Section 310, and shall be compacted to ninety-five percent (95%) relative density. All precast structures such as manhole bases, catch basins, and box culverts shall be constructed on a minimum of three (3) inches of ABC.
L. Permanent Pavement Markings.
   1. Longitudinal pavement markings shall be installed in accordance with Section 13-16-006-0001.
   2. Transverse pavement markings such as stop bars, crosswalks, arrows, and legends shall be installed in accordance with Section 13-16-006-0002.
M. Temporary Pavement Markings.
   1. Temporary pavement markings, when approved, shall be installed in accordance with Sections 13-16-006-0001 and 13-16-006-0002.

NOTES:
   1. The use of temporary markings is strongly discouraged and may only be used with prior approval. When it is used, the contractor must be available to restripe as needed until the permanent markings can be installed.
   2. When it is impracticable for the contractor to provide permanent markings, the City Public Works Department may install the markings on behalf of the contract provided the fee for the work is agreed upon and paid for in advance.
N. The maximum thickness of a single lift of pavement shall be four (4) inches. (Ord. 2017-22, Rep&ReEn, 07/05/2017)

QUANTITY SUMMARY - BID ADD 1

BID ADD 1 - HILLTOP FEEDER TRAIL			
Note No.		Qty	Unit
	REMOVALS		
001	Clear & Grub (Includes Trees ≤10" Dia.)	1	LS
002	Remove Tree & Stump >12" Dia	1	EA
003	Remove & Dispose Asphalt	10	SY
005	Remove Curb & Gutter	20	LF
	TRAIL CONSTRUCTION		
201	3" AC / 6" ABC or Match Existing	10	SY
203	4" PCC / 4" ABC Feeder Trail	1,850	SF
210	Type 'A' Curb & Gutter	20	LF
211	Type 'A' Single Curb	15	LF
216	Cast Iron Detectable Warning	1	EA
	OTHER CONSTRUCTION		
901	Sign post, fouindation, and sign installation	4	EA
920	Seed Mulch	1,315	SF
921	Hydraulically Applied Bonded Fiber Matrix	147	SY

QUANTITY SUMMARY

Note No.		Qty	Unit
	REMOVALS		
001	Clear & Grub (Includes Trees ≤12" Dia.)	1	LS
002	Remove Tree & Stump >12" Dia	41	EA
003	Remove & Dispose Asphalt	77	SY
004	Remove & Dispose Concrete	315	SF
005	Remove Curb & Gutter	105	LF
009	Tree Protection Fencing (Allowance)	1	LS
010	Remove & Dispose Bollards	4	EA
020	Remove & Dispose Sign Post	2	EA
	RELOCATIONS & ADJUSTMENTS		
101	Relocate APS Transformer	1	EA
140	Adjust Manhole	5	EA
150	Remove & replace sign on new post	1	EA
160	Relocate parking bumper and reinstall	3	EA
170	Relocate comm pedestal	1	LS
	TRAIL CONSTRUCTION		
	Earthwork Cut (Incidental)	660	CY
	Earthwork Fill (Incidental)	3,700	CY
	Subgrade Preparation (Incidental)	4,680	SY
201	3" AC / 6" ABC or Match Existing	50	SY
202	6" PCC / 4" ABC	17,280	SF
204	6" PCC / 4" ABC Parking	250	SF
205	4" Stabilized Aggregate Surface / 6" Dirty Cinders	2,565	SY
210	Type 'A' Curb & Gutter	54	LF
211	Type 'A' Single Curb	55	LF
212	6" Integral Curb	33	LF
215	Sidewalk Ramp	430	SF
216	Cast Iron Detectable Warning	3	EA
220	Residential Driveway	75	SF
225	4" ABC Match-up	7	SY
230	Retaining Wall	855	SF
240	Stacked Rock Wall	1,026	SF
	DRAINAGE CONSTRUCTION		
501	18" CMP: 14 GA, Aluminized, Type 2	493	LF
502	18" CMP Polymer Coated Storm Drain: 14 GA, Aluminized, Type	40	LF
503	12" CMP: 14 GA, Aluminized, Type 2	20	LF
504	12" DIP Storm Drain	17	LF
510	Concrete Scupper A	125	SF
511	Concrete Scupper B	360	SF
512	Integral Curb	477	LF
515	Concrete Outlet Scupper	1	EA
520	Stacked Rock Type 'U' Headwall	1	EA
521	Stacked Rock Straight Type Headwall	9	EA
522	Stacked Rock Type 'L' Headwall	6	EA
530	Type 'G' Catch Basin	3	EA
531	Type 'G' Catch Basin with 6" outlet	2	EA
532	Type 'G' Double Catch Basin Modified	1	EA
533	Type 'G' Double Catch Basin	1	EA
534	Yype 1 ADOT Double Catch Basin	1	EA
540	D50=8" x 16" Deep Flow Riprap and 6"-12" dia. Placed Riprap	1,930	SF
541	D50=8" x 16" Deep Riprap, with boulders	3,019	SF
542	D50=8" x 16" Deep Riprap	245	SF
546	D50=3" x 6" Deep Riprap	1,675	SF
548	LID Basins	1,090	SF
550	Concrete Encase CMP	1	LS
560	Erosion Control Blanket	116	SF
	OTHER CONSTRUCTION		
901	Sign Post, Foundation, and Sign Installation	9	EA
910	FUTS Rail Fence (COF Std. Det. 14-01-010)	695	LF
912	FUTS Safety Rail, Top of Wall Mount	117	LF
913	FUTS Safety Rail, with footing	83	LF
914	FUTS Gate	1	LS
915	Removable Bollard	2	EA
920	Seed Mulch	48,220	SF
921	Hydraulically Applied Bonded Fiber Matrix	5,361	SY
960	10' Crosswalk Striping	1	EA

City of Flagstaff - Flagstaff Urban Trail Switzer Canyon Trail
Sign Table

ID#	Station	Placement	Post Size	Post Height (FG to Top of Post)	Post Detail	Attachment	MUTCD Sign Code	Sign Class	Size	Sign Message
K173	10+25	--	--	--	--	Attach to FUTS fence	--	K Adopt-A-FUTS		--
E111	10+26.5	COF Detail 14-01-010	2-inch	72"	Det Q, Sheet C1.3	Weld hardware to post, attach sign	R5-3	E Regulatory	24" x 24"	No Motor Vehicles
B069	10+33	--	--	--	--	Mount lengthwise to FUTS fence	--	B Secondary Trailhead		--
D180	10+35	COF Detail 14-01-010	3-inch	72"	Det Q, Sheet C1.3	Weld hardware to top of post, attach sign	--	D Directional		Trail Name
E113	10+52	--	--	72"	Det Q, Sheet C1.3	Weld hardware to post, attach sign	R12-3	E Regulatory	12" x 18"	Weight Limit 10,000 LBS
E114	12+25	COF Detail 14-01-010	2-inch	72"	Det Q, Sheet C1.3	Weld hardware to post, attach sign	R12-3	E Regulatory	12" x 18"	Weight Limit 10,000 LBS
F065	33+93	--	--	--	--	Weld to FUTS fence	W1-7	F Warning	24" x 12"	Two Direction Arrow
E112	46+98	COF Detail 14-01-010	2-inch	72"	Det Q, Sheet C1.3	Weld hardware to post, attach sign	R5-3	E Regulatory	24" x 24"	No Motor Vehicles
E115	47+59	COF Detail 14-01-010	2-inch	72"	Det Q, Sheet C1.3	Weld hardware to post, attach sign	R5-3	E Regulatory	24" x 24"	No Motor Vehicles
C091	50+55	COF Detail 14-01-010	3-inch	60"	Det Q, Sheet C1.3	Weld hardware to post, attach sign	--	C1 Trail leader		--
*D266	1+48	COF Detail 14-01-010	3-inch	72"	Det Q, Sheet C1.3	Weld hardware to top of post, attach sign	--	D Directional		--
*F066	1+75	COF Detail 14-01-010	2-inch	72"	Det Q, Sheet C1.3	Weld hardware to post, attach sign	W7-5	F1 Warning	18" x 18"	Hill
*F064	3+55	COF Detail 14-01-010	2-inch	72"	Det Q, Sheet C1.3	Weld hardware to post, attach sign	W2-3	F1 Warning	18" x 18"	Y Intersection
*D181	4+02	COF Detail 14-01-010	3-inch	72"	Det Q, Sheet C1.3	Weld hardware to top of post, attach sign	--	D6 Directional		--

*BID ADD 1 - HILLTOP FEEDER TRAIL

1 / C1.1 SIGN TABLE

FINAL PLANS

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

REVISION	DESCRIPTION	DATE

201 E Birch Ave. Suite 3
Flagstaff, AZ 86001
(928) 774-4046
Peak ENGINEERING, INC.
Connecting Place to People

REGISTERED PROFESSIONAL ENGINEER (Civil) CERTIFICATE NO. 42777 THOMAS E. SMITH Date Signed 3/14/25 ARIZONA U.S.A.

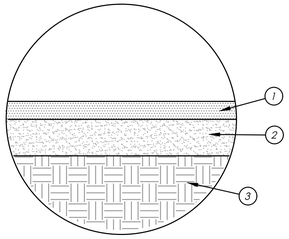
CITY OF FLAGSTAFF
FUTS - SWITZER CANYON TRAIL
NOTES & LEGEND

COF PROJECT NO. 03-16013 & ST3023 | PZ-23-00058

JOB NO: 16COF03/22COF03 | BY: CAL/DCW | CHECKED: TES

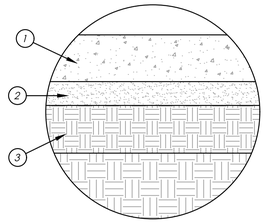
DATE: MARCH 2025

C1.1



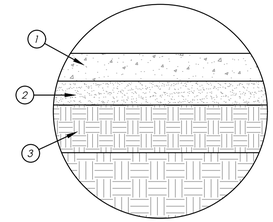
1. 3" THICK AC (3/4" MIX) PER MAG SPEC. 321 AND COF ADDENDUM TO MAG, IN ONE LIFT.
2. 6" THICK ABC, 100% COMPACTED PER MAG SPEC. 702 AND THE COF ADDENDUM TO MAG.
3. NATIVE SUBGRADE SCARIFIED TO A DEPTH OF 9", MOISTURE CONDITIONED TO OPTIMUM (±2%) PER MAG SPEC. 301.

A / C1.2 **STREET PATCH SECTION**
NOT TO SCALE



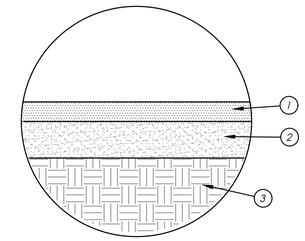
1. 6" PORTLAND CEMENT CONCRETE CLASS A, CONTAINING 5 to 7% AIR ENTRAINMENT, AND CONFORMING TO APPLICABLE REQUIREMENTS OF MAG UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION SECTION 725, MAG SPEC. 340 AND COF ADDENDUM TO MAG.
2. 4" AGGREGATE BASE COURSE PER MAG SPEC 310 AND 702 (OR RECLAIMED ASPHALT PAVEMENT PER MAG SPEC 701 AND 710). COMPACTED TO 100%.
3. REMOVE AND REPLACE UNSUITABLE MATERIALS 3-FT BELOW CONCRETE PER THE REPORT ON GEOTECHNICAL INVESTIGATION. 6" MIN. SCARIFY SUBGRADE AND COMPACT TO 90% PER MAG SPEC. 301.3. DRIED SUBGRADE SOILS MUST BE RE-MOISTENED PRIOR TO PLACING THE A.B.C. IF ALLOWED TO DRY OUT.

B / C1.2 **TYPICAL CONCRETE SECTION**
NOT TO SCALE



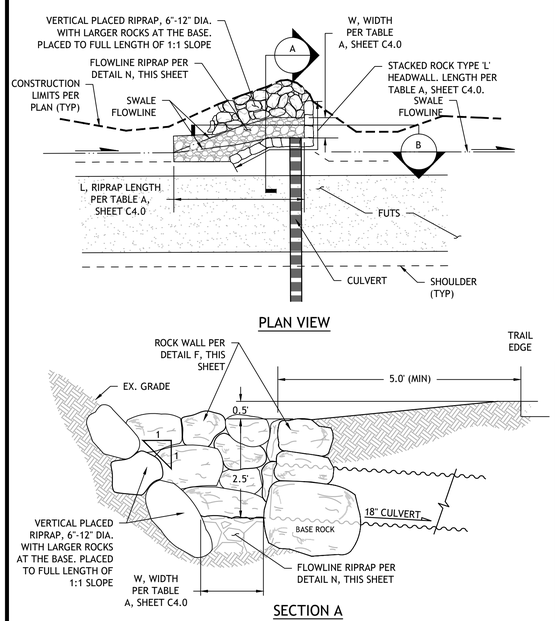
1. 4" PORTLAND CEMENT CONCRETE CLASS A, CONTAINING 5 to 7% AIR ENTRAINMENT, AND CONFORMING TO APPLICABLE REQUIREMENTS OF MAG UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION SECTION 725, MAG SPEC. 340 AND COF ADDENDUM TO MAG.
2. 4" AGGREGATE BASE COURSE PER MAG SPEC 310 AND 702 (OR RECLAIMED ASPHALT PAVEMENT PER MAG SPEC 701 AND 710). COMPACTED TO 100%.
3. REMOVE AND REPLACE UNSUITABLE MATERIALS 3-FT BELOW CONCRETE PER THE REPORT ON GEOTECHNICAL INVESTIGATION. 6" MIN. SCARIFY SUBGRADE AND COMPACT TO 90% PER MAG SPEC. 301.3. DRIED SUBGRADE SOILS MUST BE RE-MOISTENED PRIOR TO PLACING THE A.B.C. IF ALLOWED TO DRY OUT.

C / C1.2 **FEEDER TRAIL CONCRETE SECTION**
NOT TO SCALE

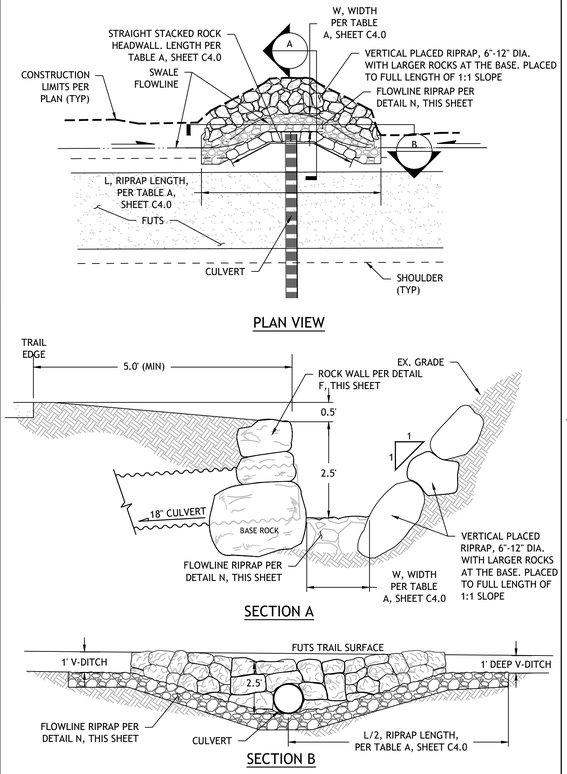


1. 4" THICK ½" DECOMPOSED GRANITE CINNAMON BROWN FROM MDI ROCK OR APPROVED EQUAL PER COF STANDARD ENGINEERING DETAIL 14-02-002. AGGREGATE PER SECTION 701 OF THE PROJECT SPECIAL PROVISIONS.
2. 6" THICK DIRTY CINDERS, 95% COMPACTED PER MAG SPEC. 310.3.
3. 6" MIN. SCARIFY SUBGRADE AND COMPACT TO 90% PER MAG SPEC. 301.3.

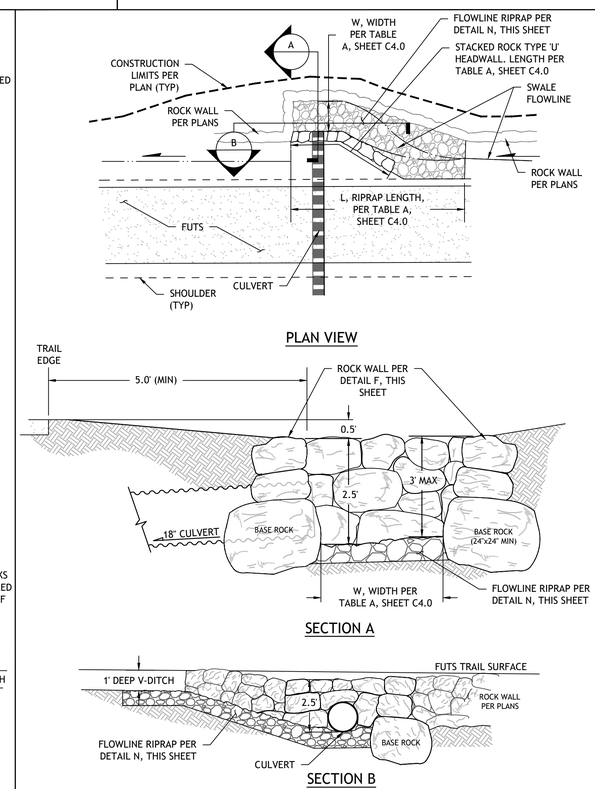
D / C1.2 **TYPICAL FUTS AGGREGATE SECTION**
NOT TO SCALE



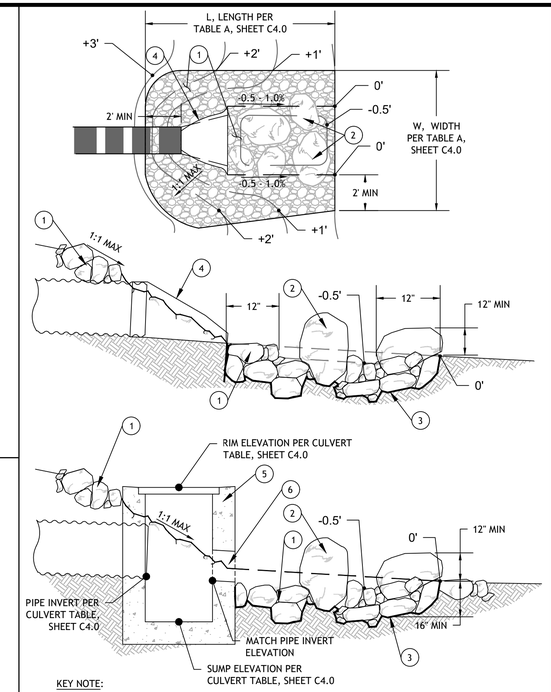
G / C1.2 **STACKED ROCK TYPE 'L' HEADWALL**
NOT TO SCALE



H / C1.2 **STRAIGHT STACKED ROCK HEADWALL**
NOT TO SCALE



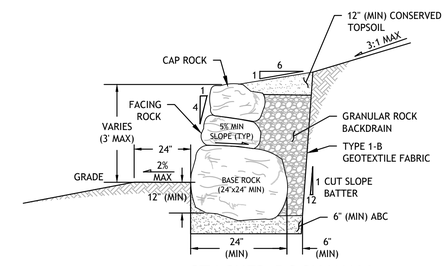
I / C1.2 **STACKED ROCK TYPE 'U' HEADWALL**
NOT TO SCALE



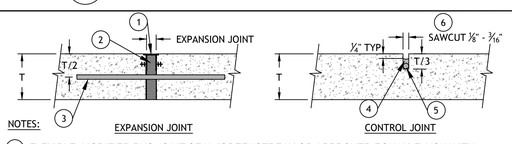
KEY NOTE:

1. D_{50}= 8" RIPRAP, 16" DEEP PER MAG SPEC. 220 & 703. ROCK SPRINGS OR CINNAMON BROWN COLOR.
2. 18"-36" BOULDER. MINIMUM OF 4 PLACED PER OUTLET IN THE FLOWLINE. (DOUBLE NUMBER OF BOULDERS FOR DOUBLE PIPE INSTALLATION).
3. CLASS A NON-WOVEN GEOTEXTILE FABRIC PER MAG SPEC. 796.
4. CULVERT END SECTION WITH TURNDOWN. 14-GAUGE, ALUMINIZED STEEL TYPE 2.
5. TYPE 'G' CATCH BASIN PER MAG STANDARD DET. 537, MODIFIED AS SHOWN. GRATE AND SUMP PER TABLE A, SHEET C4.0.
6. 12" ORIFICE.

E / C1.2 **CULVERT OUTLET TREATMENT**
NOT TO SCALE



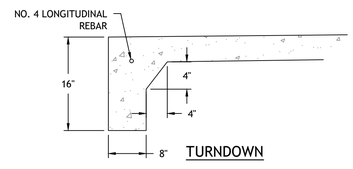
F / C1.2 **STACKED ROCK WALL**
NOT TO SCALE



NOTES:

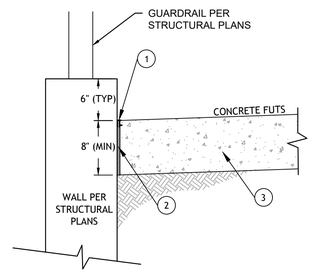
1. FLEXIBLE, MODIFIED PVC JOINT SEAL (GREENSTREAK OR APPROVED EQUAL) FLUSH WITH ADJACENT CONCRETE. THE JOINT SEAL SHALL HAVE A MINIMUM OF TWO FINS ON LEGS THAT EMBED INTO THE ADJACENT CONCRETE (BELOW FINISHED SURFACE) FOR PURPOSES OF ANCHORAGE AND CREATING A WATER STOP.
2. ½" BITUMINOUS PREFORMED EXPANSION JOINT BOARD, ASTM D-1751.
3. ¾" x 14" MIN. SMOOTH DOWEL, AT 12" O.C., 4" MIN FROM OUTSIDE EDGES. LUBRICATE ONE SIDE OF THE DOWEL OR USE SIKA GREEN STREAK SPEED DOWELS.
4. SELF-LEVELING SILICON SEALER
5. ¼" MIN. DIAMETER PE BACKER ROD
6. SAWCUT CONTROL JOINT

K / C1.2 **CONCRETE JOINT DETAIL**
NOT TO SCALE



TURNDOWN

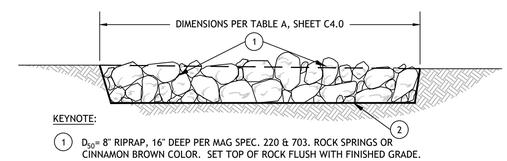
L / C1.2 **TURNDOWN DETAIL**
NOT TO SCALE



NOTES:

1. FLEXIBLE, MODIFIED PVC JOINT SEAL (GREENSTREAK G-SEAL 617 RETROFIT OR APPROVED EQUAL) FLUSH WITH ADJACENT CONCRETE. THE JOINT SEAL SHALL HAVE A MINIMUM OF TWO FINS ON THE LEG THAT EMBEDS INTO THE ADJACENT CONCRETE (BELOW FINISHED SURFACE) FOR PURPOSES OF ANCHORAGE AND CREATING A WATER STOP.
2. ½" BITUMINOUS PREFORMED EXPANSION JOINT BOARD, ASTM D-1751.
3. CONCRETE PER DETAIL B, THIS SHEET.

M / C1.2 **WALL ABUTMENT DETAIL**
NOT TO SCALE



KEYNOTE:

1. D_{50}= 8" RIPRAP, 16" DEEP PER MAG SPEC. 220 & 703. ROCK SPRINGS OR CINNAMON BROWN COLOR. SET TOP OF ROCK FLUSH WITH FINISHED GRADE.
2. CLASS A NON-WOVEN GEOTEXTILE FABRIC PER MAG SPEC. 796.

N / C1.2 **RIP-RAP DETAIL**
NOT TO SCALE

FINAL PLANS

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

REVISION	DESCRIPTION	DATE

201 E Birch Ave. Suite 3
Flagstaff, AZ 86001
(928) 774-4046
Peak ENGINEERING, INC.
Connecting Place to People

CERTIFICATE OF SURVEY — 42777 THOMAS E. SMITH — Date Signed 3/14/25

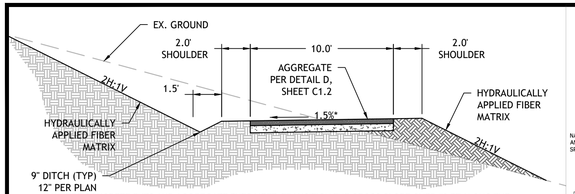
CITY OF FLAGSTAFF
FUTS - SWITZER CANYON TRAIL
DETAILS

COF PROJECT NO. 03-16013 & ST3023 | PZ-23-00058

JOB NO: 16COF03/22COF03 | BY: CAL/DCW | CHECKED: TES

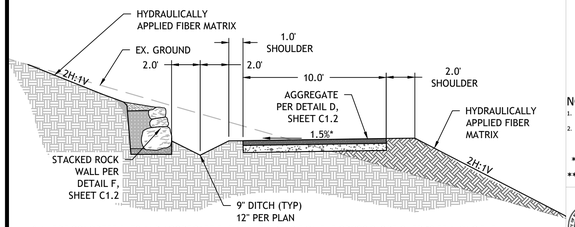
DATE: MARCH 2025

C1.2



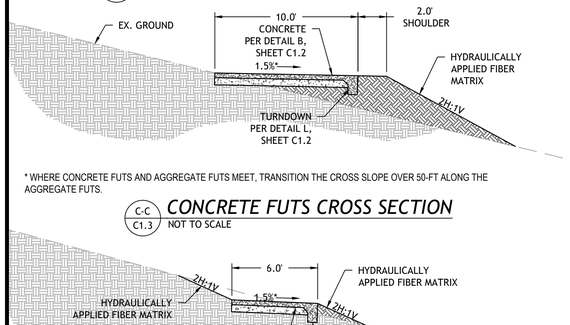
* WHERE CONCRETE FUTS AND AGGREGATE FUTS MEET, TRANSITION THE CROSS SLOPE OVER 50-FT ALONG THE AGGREGATE FUTS.

A-A / C1.3 **TYPICAL FUTS CROSS SECTION**
NOT TO SCALE



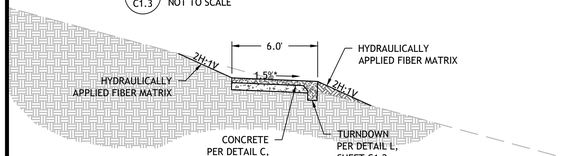
* WHERE CONCRETE FUTS AND AGGREGATE FUTS MEET, TRANSITION THE CROSS SLOPE OVER 50-FT ALONG THE AGGREGATE FUTS.

B-B / C1.3 **STACKED ROCK WALL FUTS CROSS SECTION**
NOT TO SCALE



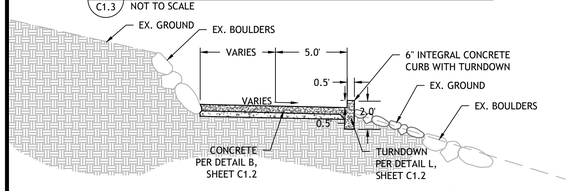
* WHERE CONCRETE FUTS AND AGGREGATE FUTS MEET, TRANSITION THE CROSS SLOPE OVER 50-FT ALONG THE AGGREGATE FUTS.

C-C / C1.3 **CONCRETE FUTS CROSS SECTION**
NOT TO SCALE

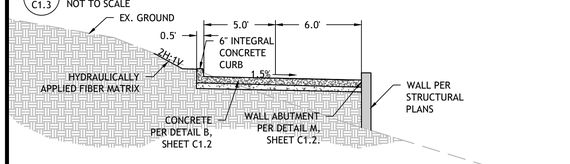


* WHERE CONCRETE FUTS AND AGGREGATE FUTS MEET, TRANSITION THE CROSS SLOPE OVER 50-FT ALONG THE AGGREGATE FUTS.

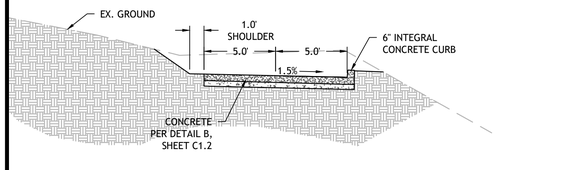
D-D / C1.3 **CONCRETE FEEDER TRAIL CROSS SECTION**
NOT TO SCALE



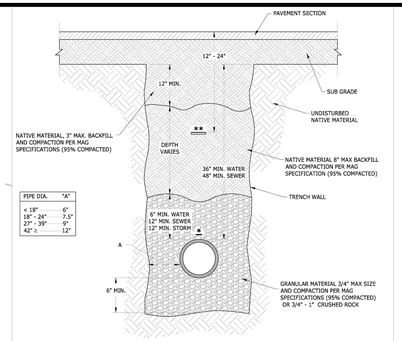
E-E / C1.3 **CONCRETE TRAIL WITH INTEGRAL CURB CROSS SECTION**
NOT TO SCALE



F-F / C1.3 **CONCRETE AT WALL W/ INTEGRAL CURB CROSS SECTION**
NOT TO SCALE



G-G / C1.3 **CONCRETE W/ INTEGRAL CURB CROSS SECTION**
NOT TO SCALE



PIPE DIA.	"A"
< 18"	6"
18" - 24"	7.5"
27" - 39"	9"
42" ≥	12"

NOTES:
1. NATIVE BACKFILL SHALL BE PER MAG SPECS AND MAY BE SELECTED FROM THE EXCAVATION MATERIAL OR FROM A SOURCE SELECTED BY THE CONTRACTOR AND APPROVED BY THE CITY ENGINEER.
2. IF THE UNPAVED STREET HAS A SURFACE MATERIAL (ABC, CINDERS, ETC) OTHER THAN NATIVE, THE SURFACE MATERIAL SHALL BE REPLACED TO ITS EXISTING DEPTH.
3. NON-SHRINK BACKFILL IN ACCORDANCE WITH COF STD. 9-6-030 AND MAY BE USED FOR BACKFILL UP TO 6" BELOW FINISH GRADE. THE FINAL 6" SHALL BE NATIVE MATERIAL 8" MAX. THE NON-SHRINK BACKFILL SHALL BE PROPORTIONED AS FOLLOWS: 2600 LBS OF 3/8" MINUS AGGREGATE, 800 LBS SAND, 94 LBS CEMENT AND 11 GALLONS WATER

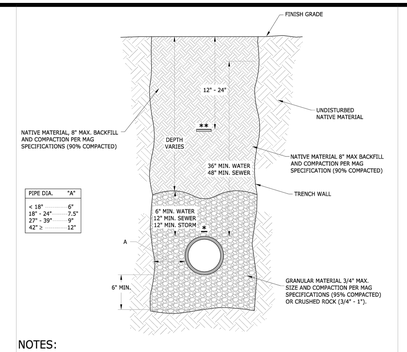
✱ TRACER WIRE TAPED TO TOP CENTER OF MAIN WITH 10MIL PVC TAPE ON 4' CENTERS, SEE COF STD 9-01-020.

✱✱ WARNING TAPE

NTS

City of Flagstaff — ENGINEERING DETAIL | DETAIL NO. 09-01-031 | REVISION DATE: 12/30/2017 | 1/1

TRENCHING AND BACKFILL NEW PAVED STREET



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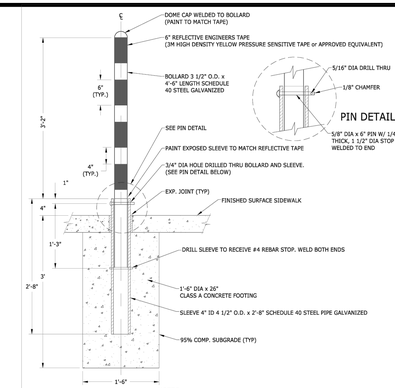
✱✱ WARNING TAPE

NTS

City of Flagstaff — ENGINEERING DETAIL | DETAIL NO. 09-01-032 | REVISION DATE: 12/30/2017 | 1/1

TRENCHING AND BACKFILL UNPAVED EASEMENT OR STREET

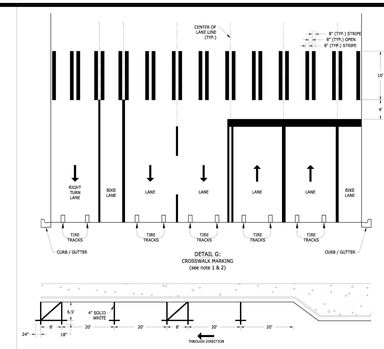


NOTES:
1. BOLLARD IS TO BE PAINTED AS FOLLOWS:
   1.1. PRIMER: TWO (2) COATS - COMPONENT ETCHING WASH PRIMER
   1.2. INTERMEDIATE: TWO (2) COATS - COMPONENT EPOXY PRIMER
   1.3. FINISH: ONE (1) COAT - "FRAZEE - 7636N LUSH VERANDA" HEAVY DUTY ENAMEL (ALKYD BASED) OR EQUAL
2. FOOTINGS AND BOLLARDS TO BE INSTALLED PRIOR TO POURING CONCRETE
3. BOLLARDS SHALL NOT BE IN THE WAY OF VEHICULAR TRAFFIC

NTS NTS

City of Flagstaff — ENGINEERING DETAIL | DETAIL NO. 13-03-014 | REVISION DATE: 12/30/2017 | 1/1

REMOVABLE BOLLARD



NOTES:
1. FOR ROADWAYS WITH MORE OR LESS LANES, SAME CONFIGURATION APPLIES. KEEP CROSSWALK BARS CENTERED ON LANE LINES, IN CENTER OF TRAVELED PORTION OF LANE TO MINIMIZE WEAR ON CROSSWALK STRIPES, AND PARALLEL TO LANES WITHIN. DETAIL IS INTENDED TO BE REPRESENTATIVE ONLY. FINAL LAYOUT OF PAVEMENT MARKINGS IS DEPENDENT ON SPECIFIC LANE CONFIGURATION OF STREET.
2. CITY INSPECTOR SHALL INVOLVE TRAFFIC ENGINEERING SECTION FOR REVIEWING NONSTANDARD LAYOUTS PRIOR TO INSTALLING MARKINGS, FOR WHICH AT LEAST 24-HOURS NOTICE IS REQUIRED.
3. FOR MORE THAN TWO (2) 20 FOOT PARALLEL PARKING STALLS, ONE (1) PARKING MANEUVERING BOX IS REQUIRED BETWEEN THE SECOND AND THIRD STALL.

NTS

City of Flagstaff — ENGINEERING DETAIL | DETAIL NO. 16-06-010 | REVISION DATE: 12/30/2017 | 3/4

INTERSECTION STRIPING

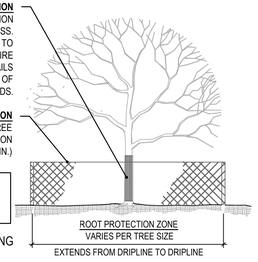
STRIPING DETAILS

TRUNK PROTECTION
REQUIRED IF WHEELED CONSTRUCTION EQUIPMENT INVOLVED WITHIN 20' OR LESS. 1" BOARDS NOT LESS THAN 5' LONG OR TO REACH FIRST SCAFFOLD BRANCH. WIRE TO HOLD BOARDS IN PLACE, NO NAILS PERMITTED. INCLUDE WRAPPING OF BURLAP UNDER BOARDS.

BRANCH PROTECTION
PROTECT LOWER BRANCHES OF TREE CANOPY. PROVIDE CONSTRUCTION FENCING OR EQUAL AT DRIPLINE (MIN.)

KEEP OUT
TREE PROTECTION
AREA

PLACE SIGNS
EVERY 50' ATTACHED TO FENCING



TREE PROTECTION NOTES

1. TREES AND SHRUBS TO BE PROTECTED AND PRESERVED SHALL BE IDENTIFIED ON THE TRUNK WITH WHITE SURVEY TAPE.

FENCING

2. FENCING SHALL BE INSTALLED PER THE TREE PROTECTION DETAIL FOR PROTECTED TREES PRIOR TO CONSTRUCTION AND REMAIN IN PLACE THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES. TREE FENCING SHALL NOT BE ATTACHED TO TREES. GROUPING OF MORE THAN ONE TREE MAY OCCUR.
3. FENCING MATERIAL SHALL ENCIRCLE ANY TREE OR SHRUB WHOSE OUTER DRIP LINE EDGE IS WITHIN 50 FEET OF ANY CONSTRUCTION ACTIVITIES.
4. FENCING MATERIAL SHALL BE BRIGHT, CONTRASTING COLOR, DURABLE, (POLYETHYLENE LAMINAR SAFETY FENCING) AND A MINIMUM OF FOUR FEET IN HEIGHT.
5. FENCING MATERIAL SHALL BE SET AT THE DRIP LINE PLUS 5-FT AND MAINTAINED IN AN UPRIGHT POSITION.
6. FENCING CAN BE ADJUSTED AFTER ROUGH GRADING AS ALLOWED BY THE COF ZONING CODE SECTION 10-50.90.070.C.8 BUT IS LIMITED TO AREAS WHERE SITE IMPROVEMENTS CANNOT BE CONSTRUCTED WITOUT FENCE ADJUSTMENT. WHEN FENCING IS SHIFTED, TREES SHALL BE PROTECTED ACCORDING TO ROOT PROTECTION NOTES.

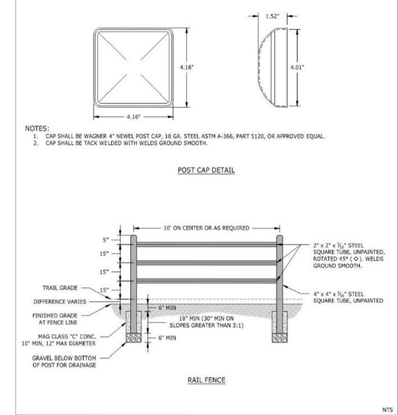
CONSTRUCTION ACTIVITIES

7. ANY GRADE CHANGES (SUCH AS THE REMOVAL OF TOPSOIL OR ADDITION OF FILL MATERIAL) WITHIN THE DRIP LINE SHOULD BE AVOIDED FOR PROTECTED TREES. RETAINING WALLS AND TREE WELLS ARE ACCEPTABLE ONLY WHEN CONSTRUCTED PRIOR TO GRADE CHANGE.
8. WHEN FILLING IS REQUIRED UNDER THE DRIP LINE OF PROTECTED TREES, DEPTH OF FILL SHALL BE LIMITED TO 12" MAXIMUM. BORROW FILL BELOW THE DRIP LINE SHALL NOT BE COMPACTED.
9. TREE BRANCHES ENCROACHING OVER NEW IMPROVEMENTS SHALL BE REMOVED IN ACCORDANCE WITH MAG SPEC. SECTION 201, 12-FT ABOVE ROADWAYS AND VEHICLE AREAS AND 10-FT ABOVE PEDESTRIAN AREAS.

ROOT PROTECTION

10. TO PREVENT ROOT SMOTHERING, SOIL STOCKPILES, SUPPLIES, EQUIPMENT OR ANY OTHER MATERIAL SHALL NOT BE PLACED OR STORED WITHIN THE TREE DRIP LINE PLUS 5-FT EXCEPT AS ALLOWED BY THE CITY'S ZONING CODE. SOIL WITHIN THE DRIP LINE SHALL NOT BE COMPACTED.
11. TRENCHES SHALL BE HAND DUG WITHIN THE TREE DRIP LINE OR WHEN IN CLOSE PROXIMITY TO LOW BRANCHING TREES. WHENEVER POSSIBLE, ROOTS TWO INCHES OR GREATER IN DIAMETER SHALL BE TUNNELED OR BORED UNDER AND SHALL BE COVERED TO PREVENT DEHYDRATION.
12. TREE AND SHRUB ROOTS SHALL NOT BE CUT UNLESS CUTTING IS UNAVOIDABLE. BUTTRESS ROOTS WITHIN 6' OF THE TRUNK MUST NOT BE CUT.
13. WHEN ROOT CUTTING IS UNAVOIDABLE, A CLEAN SHARP CUT SHALL BE MADE TO AVOID SHREDDING OR SMASHING. ROOT CUTS SHOULD BE MADE BACK TO A LATERAL ROOT. WHENEVER POSSIBLE, ROOTS SHOULD BE CUT BETWEEN LATE FALL AND BUD OPENING, WHEN ROOT ENERGY SUPPLIES ARE HIGH, AND CONDITIONS ARE LEAST FAVORABLE FOR DISEASE CAUSING AGENTS. EXPOSED ROOTS SHALL BE COVERED IMMEDIATELY WITH SOIL OR BURLAP AND KEPT MOIST TO PREVENT DEHYDRATION.
14. CONTRACTOR SHALL WATER PROTECTED TREES WITH ROOTS THAT WERE CUT.

P / C1.3 **TREE PROTECTION DETAIL**
NOT TO SCALE



NOTES:
1. CAP SHALL BE WAGNER 4" NEWEL POST CAP, 18 GA. STEEL ASTM A-366, PART 5120, OR APPROVED EQUAL.
2. CAP SHALL BE TACK WELDED WITH WELDS GROUND SMOOTH.

POST CAP DETAIL

RAIL FENCE

NTS

City of Flagstaff — ENGINEERING DETAIL | DETAIL NO. 14-02-010 | REVISION DATE: 01/09/2024 | 1/1

FLAGSTAFF URBAN TRAILS SYSTEM: FENCING

AGGREGATE SURFACE MATERIAL (FOR UNPAVED SECTION):

1. AGGREGATE SURFACE MATERIAL SHALL BE A COLOR COMPATIBLE WITH NATURAL SURROUNDINGS AND ACCEPTABLE TO THE CITY OR COUNTY. WHITE, LIGHT GREY OR OTHER VISUALLY INCOMPATIBLE COLORED AGGREGATES WILL NOT BE ACCEPTED.
2. AGGREGATE SURFACE MATERIAL SHALL HAVE A PLASTICITY INDEX OF 5-12, AND THE GRADATION SHALL BE AS FOLLOWS:

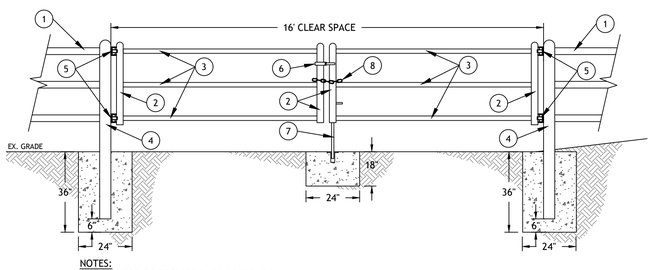
SIEVE SIZE (SQUARE OPENINGS)	PERCENT BY WEIGHT PASSING SIEVE
1/4"	100
No. 4	90 - 100
No. 8	65 - 95
No. 10	60 - 80
No. 16	45 - 75
No. 30	35 - 60
No. 40	30 - 40
No. 50	25 - 40
No. 100	20 - 30
No. 200	12 - 23

3. DIRTY CINDERS SHALL COMPLY WITH MAG SECTION 702 AND CITY OF FLAGSTAFF MODIFICATION 13-21-001-0702.2.2, EXCEPT THAT THE LOS ANGELES ABRASION REQUIREMENT IS WAIVED.
4. HERBICIDE SHALL BE SURFLAN o OR APPROVED EQUAL FOR PRE-EMERGENT CONTROL AND ORGANIC, NON-GLYPHOSATE PRODUCT FOR POST-EMERGENT CONTROL.
5. HERBICIDES SHALL BE MIXED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS FOR NON-CROP LAND USE. PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO THE SUBGRADE SURFACE AT A RATIO OF 1.5 GALLONS TO 100 GALLONS OF WATER PER ACRE. CARE SHALL BE GIVEN TO CONTAINING THE HERBICIDES TO THE FUTS TRAIL LIMITS ONLY.
6. HERBICIDES SHALL BE MIXED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS FOR NON-CROP LAND USE. POST EMERGENT HERBICIDES SHALL BE APPLIED TO FUTS TRAIL AFTER THE SUBGRADE HAS BEEN SCARIFIED AND BEFORE SHAPING AND COMPACTING THE BASE. THE POST EMERGENT HERBICIDE SHALL BE APPLIED AT A RATIO OF 1.5 GALLONS OF WATER PER ACRE. CARE SHALL BE GIVEN TO CONTAINING HERBICIDES TO THE FUTS TRAIL LIMITS ONLY.

NTS

City of Flagstaff — ENGINEERING DETAIL | DETAIL NO. 14-02-002 | REVISION DATE: 01/09/2024 | 2/2

FLAGSTAFF URBAN TRAILS SYSTEM: AGGREGATE TRAIL SURFACE MATERIAL

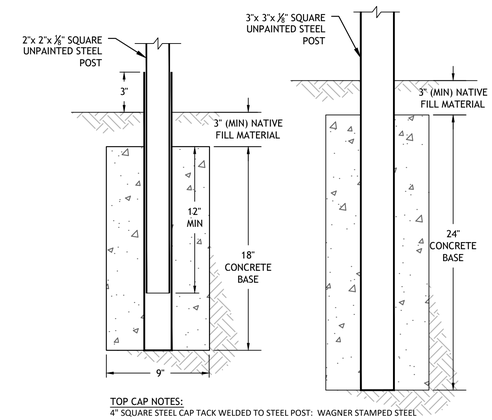


NOTES:
CONTRACTOR TO PROVIDE SHOP DRAWINGS.

1. FUTS FENCE PER CITY OF FLAGSTAFF DETAIL 14-01-010.
2. 3"x3"x 3/16" UNPAINTED STEEL TO MATCH FUTS STANDARDS.
3. 2"x2"x 3/16" UNPAINTED STEEL TO MATCH FUTS STANDARDS.
4. 4"x4"x 1/4" UNPAINTED STEEL WITH PEAKED CAP PER CITY OF FLAGSTAFF DET. 14-01-010.
5. DOUBLE ROLLER BEARING HINGE. SHUT-IT MODEL: THE RUSTED ORIGINAL BADASS HINGE, PART #C13100. 2000 LB LOAD RATING OR APPROVED EQUAL.
6. UNPAINTED STEEL LOCKABLE GATE LATCH.
7. DROP ROD WITH EMBEDDED SLEEVE.
8. CHAIN (IF MULTIPLE LOCKS ARE TO BE USED.)

N/A SINGLE 3"x3"x 3/16" TIE POST UNPAINTED STEEL WITH PEAKED CAP PER CITY OF FLAGSTAFF DET. 14-01-010. SET ~7' ON THE UPHILL SIDE OF THE GATE

O / C1.3 **DRIVE GATE DETAIL**
NOT TO SCALE

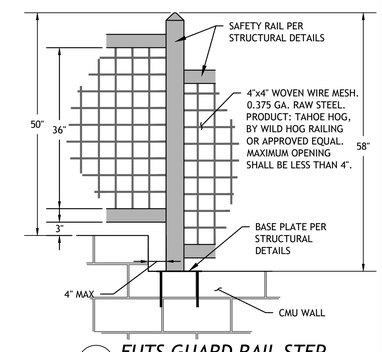


TOP CAP NOTES:
4" SQUARE STEEL CAP TACK WELDED TO STEEL POST: WAGNER STAMPED STEEL POST CAP #5120 OR APPROVED EQUAL. UNTREATED STEEL, ALLOWED TO RUST.

3" SQUARE STEEL CAP TACK WELDED TO STEEL POST: WAGNER STAMPED STEEL POST CAP #5106 OR APPROVED EQUAL. UNTREATED STEEL, ALLOWED TO RUST.

2" SQUARE STEEL CAP TACK WELDED TO STEEL POST: WAGNER STAMPED STEEL POST CAP #5100 OR APPROVED EQUAL. UNTREATED STEEL, ALLOWED TO RUST.

Q / C1.3 **SIGN POST BASE & CAP**
NOT TO SCALE



R / C1.3 **FUTS GUARD RAIL STEP**
NOT TO SCALE

FINAL PLANS

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

DATE	DESCRIPTION	REVISION

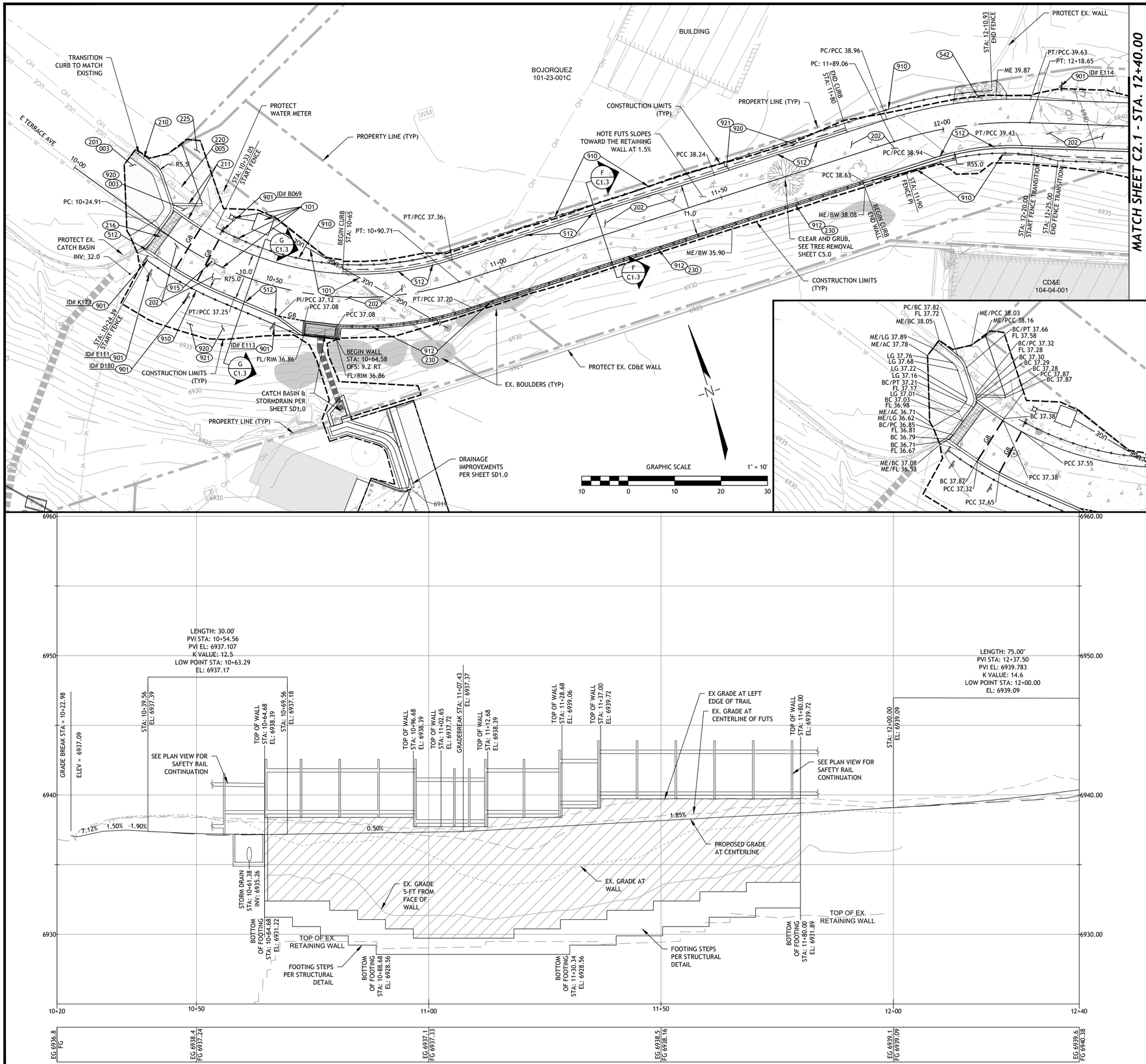
201 E Birch Ave. Suite 3
Flagstaff, AZ 86001
(928) 774-4046
Peak ENGINEERING, INC.
Connecting Place to People

REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 42777 THOMAS E. SMITH Date Signed 3/14/25 ARIZONA U.S.A.

CITY OF FLAGSTAFF
FUTS - SWITZER CANYON TRAIL DETAILS

COF PROJECT NO. 03-16013 & ST3023 | PZ-23-00058
JOB NO: 16COF03/22COF03 | BY: CAL/DCW | CHECKED: TES
DATE: MARCH 2025

C1.3



CONSTRUCTION NOTES

REMOVALS (000)

NOTE 003 17 SY
Remove and dispose existing asphalt to a neat sawcut.

NOTE 005 40 LF
Remove and dispose of existing curb and gutter to the nearest joint.

RELOCATIONS & ADJUSTMENTS (100)

NOTE 101 1 EA
Contractor shall schedule and coordinate relocation of APS transformer, underground electrical connection and utility pole with the City of Flagstaff and APS prior to construction.

CONSTRUCTION (200)

NOTE: All concrete shall conform to City of Flagstaff Revision to the MAG Uniform Standard Specifications Section 13-21-001-0725.1, Class A Concrete with 5% to 7% entrained air.

NOTE 201 11 SY
3" AC / 6" ABC per Detail A, Sheet C1.2 or match existing asphalt and ABC thickness whichever is greater.

NOTE 202 2,295 SF
6" PCC / 4" ABC trail section per Detail B, Sheet C1.2, Section C-C, Sheet C1.3, and COF Engineering Det. 14-02-001. Joints and doweling per COF Engineering Det. 14-02-005. Widen FUTS 2-ft along the south side and construct 16" turndown per Detail L, Sheet C1.2 from Sta. 11+80 to 12+02.

NOTE 210 26 LF
Type A curb & gutter on 3" ABC per MAG Standard Det. 220 and the City of Flagstaff Revision to the MAG Uniform Standard Specifications.

NOTE 211 10 LF
Type A single curb on 3" ABC per MAG Standard Det. 222 and the City of Flagstaff Revision to the MAG Uniform Standard Specifications.

NOTE 216 1 EA
Cast iron detectable warning per COF Engineering Det. 10-10-043, extending the full width of the curb ramp.

NOTE 220 75 SF
Residential driveway per MAG Standard Det. 250-1 with grades modified as shown on these plans, and per the City of Flagstaff Revision to the MAG Uniform Standard Specifications.

NOTE 225 7 SY
4" thick ABC driveway matchup 95% compaction.

NOTE 230 855 SF
Split face retaining wall per structural plans and details and project special provisions.

DRAINAGE CONSTRUCTION (500)

NOTE: All concrete shall conform to City of Flagstaff Revision to the MAG Uniform Standard Specifications Section 13-21-001-0725.1, Class A Concrete with 5% to 7% entrained air.

NOTE 512 165 LF
Integral curb per Section E-E and F-F, Sheet C1.3.

NOTE 542 45 SF
Riprap, D_{50}= 8", 16" deep on geotextile fabric per Detail N, Sheet C1.2.

OTHER CONSTRUCTION (900)

NOTE 901 5 EA
Sign post, foundation, sign installation/attachment. City of Flagstaff will furnish sign, sign hardware, and post to the Contractor. Contractor shall install post, concrete footing, hardware, & sign per Table 1, Sheet C1.1; Detail Q, Sheet C1.3; City of Flagstaff Engineering Detail 14-01-010.

NOTE 910 275 LF
Rail fence per City of Flagstaff Engineering Detail 14-01-010.

NOTE 912 117 LF
Safety rail fence mounted to retaining wall per structural plans and Detail R, Sheet C1.3. Includes wire mesh per Detail 102, Sheet S3.

NOTE 915 1 EA
Removable bollard per City of Flagstaff Engineering Detail 13-03-014, Calpipe Industries Inc, SSR Series Type 316 or approved equal.

NOTE 920 1,380 SF
Seed mulch per City of Flagstaff Engineering Standard 13-17-002-0003.

NOTE 921 154 SY
Hydraulically applied bonded fiber matrix, Flexterra-HP-FGM or approved equal. Install erosion control blanket on cut and fill slopes greater than 6' in height.

X - Culvert per Culvert Table, Sheet C4.0

FINAL PLANS

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REVISION	DESCRIPTION	DATE

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Peak ENGINEERING, INC.
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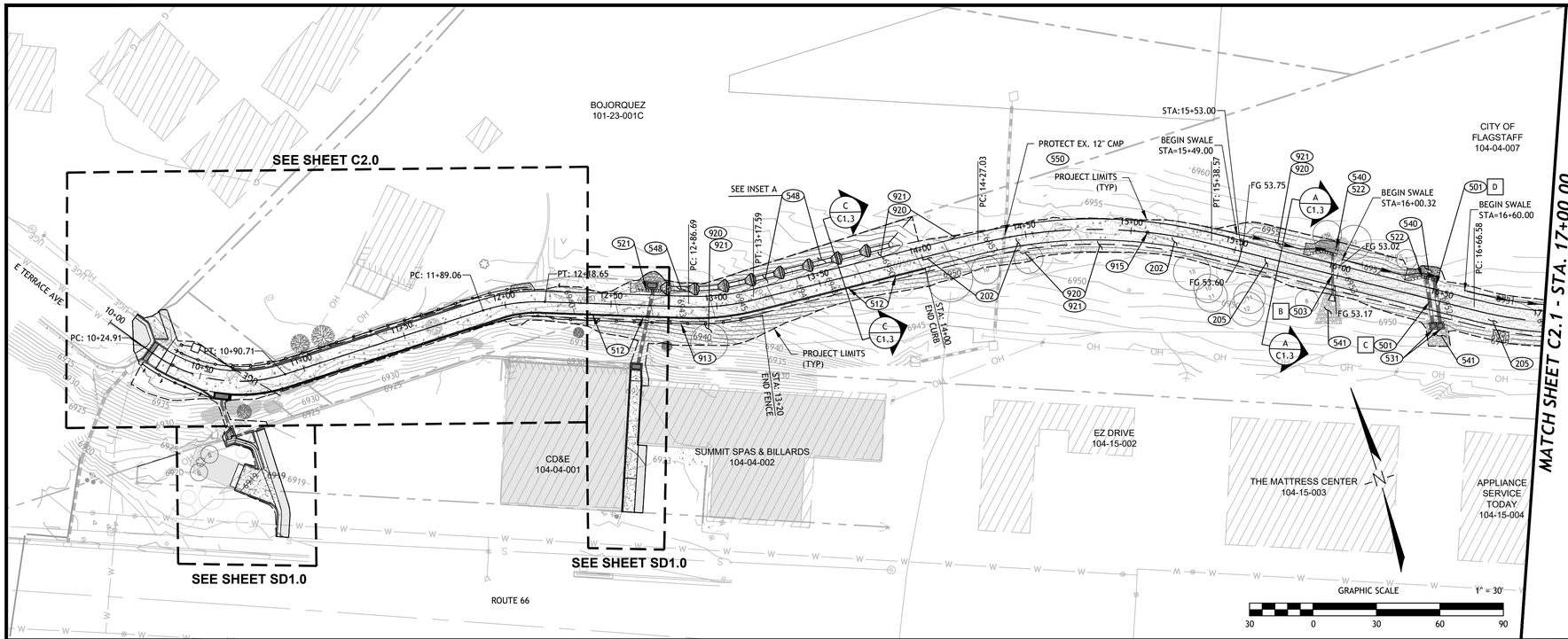
CERTIFICATE NO. 42777 THOMAS E. SMITH ARIZONA U.S.A. 3/14/25

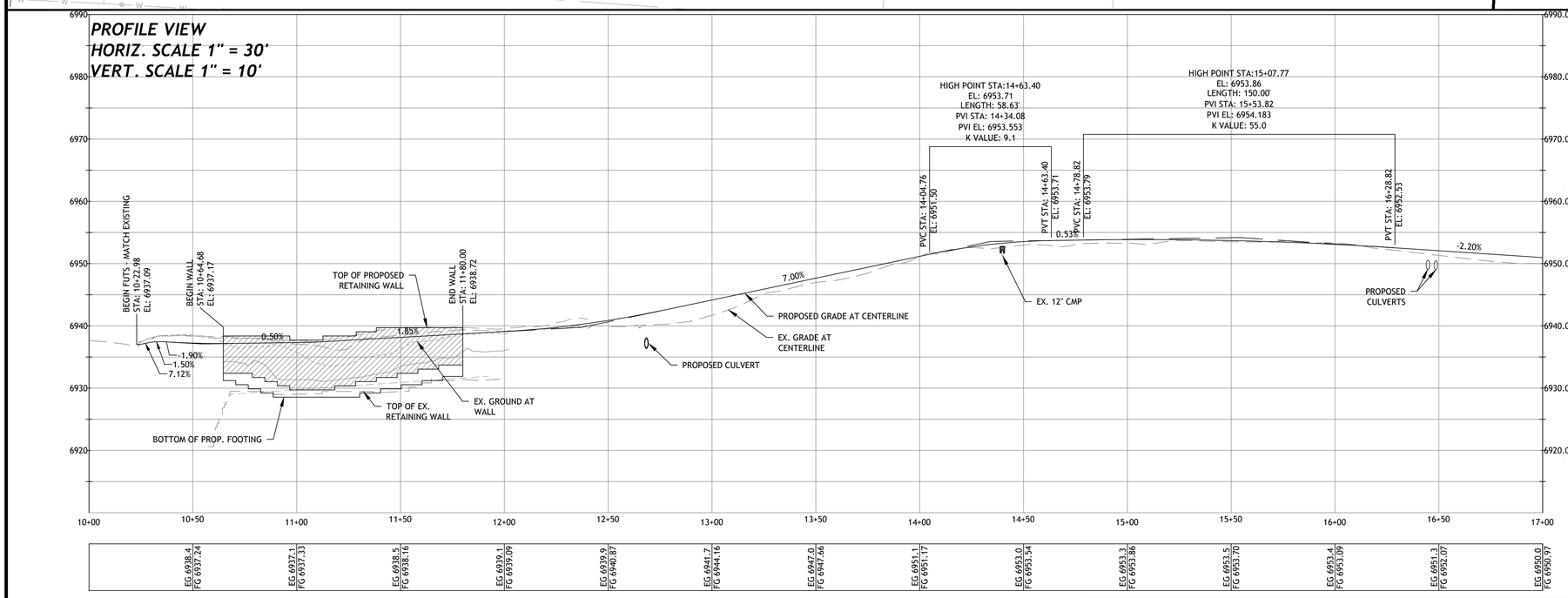
CITY OF FLAGSTAFF
FUTS - SWITZER CANYON TRAIL
FUTS STA 10+00 TO 12+40

COF PROJECT NO. 03-16013 & ST3023 | PZ-23-00058

JOB NO: 16COF03/22COF03 | BY: CAL/DCW
DATE: MARCH 2025 | CHECKED: TES

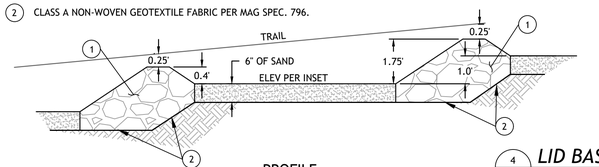
C2.0



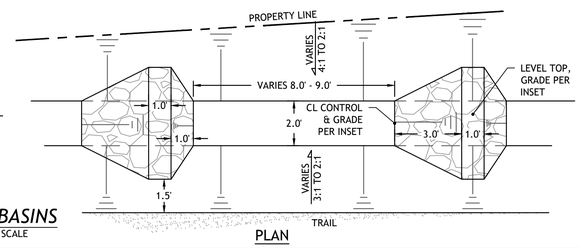


KEYNOTE:

1. D_{50}= 6" RIPRAP, PER MAG SPEC. 220 & 703. ROCK SPRINGS OR CINNAMON BROWN COLOR.
2. CLASS A NON-WOVEN GEOTEXTILE FABRIC PER MAG SPEC. 796.

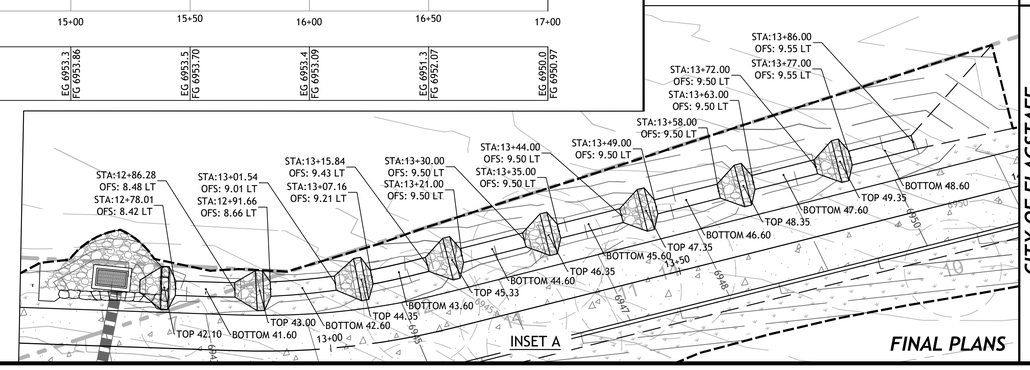


PROFILE



PLAN

4 / C2.1 LID BASINS
NOT TO SCALE



INSET A

FINAL PLANS

CONSTRUCTION NOTES

REMOVALS (000)

See Sheet C5.0 for tree removal.

CONSTRUCTION (200)

NOTE: All concrete shall conform to City of Flagstaff Revision to the MAG Uniform Standard Specifications Section 13-21-001-0725.1, Class A Concrete with 5% to 7% entrained air.

NOTE 202 3,130 SF
6" PCC / 4" ABC trail section per Detail B, Sheet C1.2, Section C-C, Sheet C1.3, and COF Engineering Det. 14-02-001. Joints and doweling per COF Engineering Det. 14-02-005.

NOTE 205 166 SY
4" Aggregate Surface / 6" Dirty Cinders per COF Engineering Det. 14-02-002 and Sections A-A and B-B, Sheet C1.3. Aggregate modified per Detail D, Sheet C1.2.

DRAINAGE CONSTRUCTION (500)

NOTE: All concrete shall conform to City of Flagstaff Revision to the MAG Uniform Standard Specifications Section 13-21-001-0725.1, Class A Concrete with 5% to 7% entrained air.

NOTE 501 65 LF
18" CMP Storm Drain, 14-gauge, aluminized steel type 2 per Table A, Sheet C4.0. Includes end treatment per Detail E, Sheet C1.2 (unless Type 'G' catch basin - Note 531, is called out). Trenching per City of Flagstaff Engineering Det. 9-01-031 & 9-01-032. Installation includes brown carsonite markers both sides of the trail and culvert per COF Engineering Det. 14-01-010. For double culvert installations provide minimum 24" separation from outside of pipe to outside of pipe.

NOTE 503 20 LF
12" CMP Storm Drain, 14-gauge, aluminized steel type 2 per Table A, Sheet C4.0. Includes end treatment per Detail E, Sheet C1.2. Trenching per City of Flagstaff Engineering Det. 9-01-031 & 9-01-032. Installation includes brown carsonite markers both sides of the trail and culvert per COF Engineering Det. 14-01-010.

NOTE 512 215 LF
Integral curb per Section E-E and F-F, Sheet C1.3.

NOTE 521 1 EA
Type 'Straight' stacked rock headwall per Detail H, Sheet C1.2.

NOTE 522 2 EA
Type 'L' stacked rock headwall per Detail G, Sheet C1.2.

NOTE 531 2 EA
Type 'G' catch basin per Detail E, Sheet C1.2.

NOTE 540 277 SF
Flowline riprap, D_{50}= 8", 16" deep and vertical placed riprap, 6" - 12" dia. on geotextile fabric per Detail G, H, I and N, Sheet C1.2.

NOTE 541 476 SF
Riprap, D_{50}=8", 16" deep on geotextile fabric per Detail E, Sheet C1.3. Place a minimum of four 18"-36" boulders directly in the flow line of the culvert.

NOTE 546 145 SF
Riprap, D_{50}=4", 8" deep, per MAG Spec 220 on geotextile fabric.

NOTE 548 1,090 SF
LID Basins. Includes earthwork, riprap check dams, sand, and filter baric per Detail 4, this sheet.

NOTE 550 1 LS
Concrete cap existing CMP from spring line to 6" above top of pipe and 6" either side of pipe.

NOTE 560 116 SF
Permanent erosion control blanket, American Excelsior, Recyclex TRM or approved equal.

OTHER CONSTRUCTION (900)

NOTE 913 83 LF
Safety rail fence per structural plans and details with footing per COF Engineering Detail 14-01-010. Includes wire mesh per Detail 102, Sheet 53.

NOTE 915 1 EA
Removable bollard per City of Flagstaff Engineering Detail 13-03-014, Calpipe Industries Inc, SSR Series Type 316 or approved equal.

NOTE 920 4,860 SF
Seed mulch per City of Flagstaff Engineering Standard 13-17-002-0003.

NOTE 921 540 SY
Hydraulically applied bonded fiber matrix, Flexterra-HP-FGM or approved equal. Install erosion control blanket on cut and fill slopes greater than 6' in height.

X - Culvert per Culvert Table, Sheet C4.0

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ARIZONA811
Call 811 or click Arizona811.com

REVISION	DESCRIPTION	DATE

Peak ENGINEERING, INC.
Connecting Place to People
201 E Birch Ave. Suite 3
Flagstaff, AZ 86001
(928) 774-4046

Registered Professional Engineer (Civil)
CERTIFICATE NO. 42777
THOMAS E. SMITH
Date Signed 3/14/25
Arizona U.S.A.

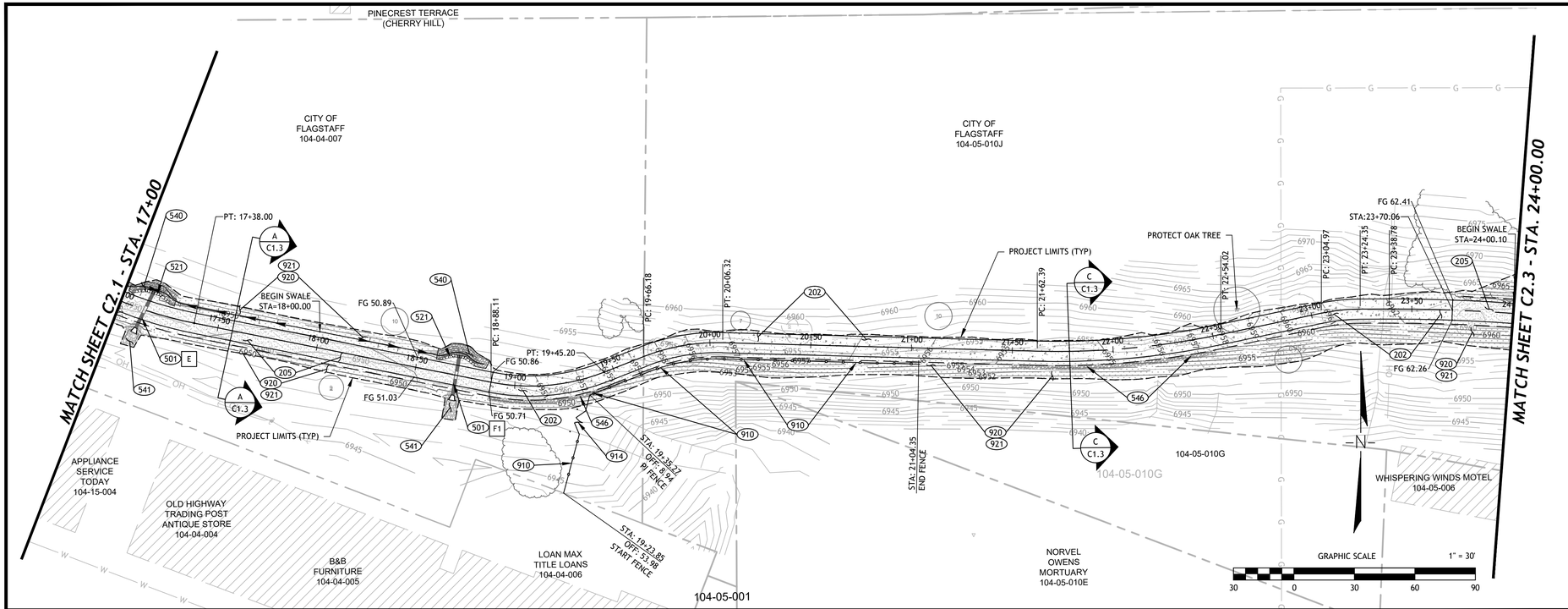
CITY OF FLAGSTAFF
FUTS - SWITZER CANYON TRAIL
FUTS STA 10+00 TO 17+00

COF PROJECT NO. 03-16013 & ST3023 | PZ-23-00058

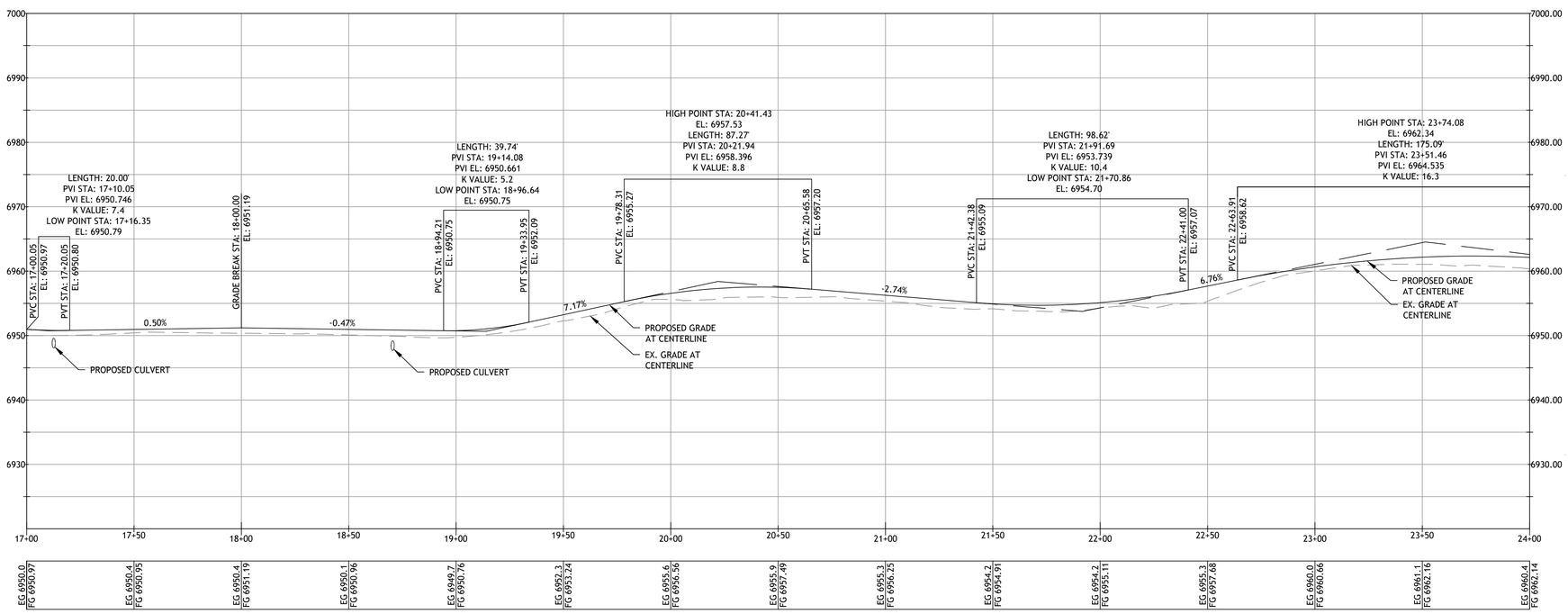
JOB NO: 16COF03/22COF03 | BY: CAL/DCW | CHECKED: TES

DATE: MARCH 2025

C2.1



PROFILE VIEW
HORIZ. SCALE 1" = 30'
VERT. SCALE 1" = 10'



CONSTRUCTION NOTES

REMOVALS (000)

See Sheet C5.0 for tree removal.

CONSTRUCTION (200)

NOTE: All concrete shall conform to City of Flagstaff Revision to the MAG Uniform Standard Specifications Section 13-21-001-0725.1, Class A Concrete with 5% to 7% entrained air.

NOTE 202 4,820 SF
6" PCC / 4" ABC trail section per Detail B, Sheet C1.2, Section C-C, Sheet C1.3, and COF Engineering Det. 14-02-001. Joints and doweling per COF Engineering Det. 14-02-005.

NOTE 205 244 SY
4" Aggregate Surface / 6" Dirty Cinders per COF Engineering Det. 14-02-002 and Sections A-A and B-B, Sheet C1.3. Aggregate modified per Detail D, Sheet C1.2.

DRAINAGE CONSTRUCTION (500)

NOTE: All concrete shall conform to City of Flagstaff Revision to the MAG Uniform Standard Specifications Section 13-21-001-0725.1, Class A Concrete with 5% to 7% entrained air.

NOTE 501 40 LF
18" CMP Storm Drain, 14-gauge, aluminized steel type 2 per Table A, Sheet C4.0. Includes end treatment per Detail E, Sheet C1.2 (unless Type 'G' catch basin - Note 531, is called out). Trenching per City of Flagstaff Engineering Det. 9-01-031 & 9-01-032. Installation includes brown carsonite markers both sides of the trail and culvert per COF Engineering Det. 14-01-010. For double culvert installations provide minimum 24" separation from outside of pipe to outside or pipe.

NOTE 521 2 EA
Type 'Straight' stacked rock headwall per Detail H, Sheet C1.2.

NOTE 540 265 SF
Flowline riprap, D_{50}= 8", 16" deep and vertical placed riprap, 6" - 12" dia. on geotextile fabric per Detail G, H, I and N, Sheet C1.2.

NOTE 541 194 SF
Riprap, D_{50}= 8", 16" deep on geotextile fabric per Details E, Sheet C1.2. Place a minimum of four 18"-36" boulders directly in the flow line of the culvert.

NOTE 546 335 SF
Riprap, D_{50}=4", 8" deep, per MAG Spec 220 on geotextile fabric.

OTHER CONSTRUCTION (900)

NOTE 910 205 LF
Rail fence per City of Flagstaff Engineering Detail 14-01-010.

NOTE 914 1 LS
Gate per Detail O, Sheet C1.3.

NOTE 920 8,365 SF
Seed mulch per City of Flagstaff Engineering Standard 13-17-002-0003.

NOTE 921 930 SY
Hydraulically applied bonded fiber matrix, Flexterra-HP-FGM or approved equal. Install erosion control blanket on cut and fill slopes greater than 6' in height.

X - Culvert per Culvert Table, Sheet C4.0

FINAL PLANS

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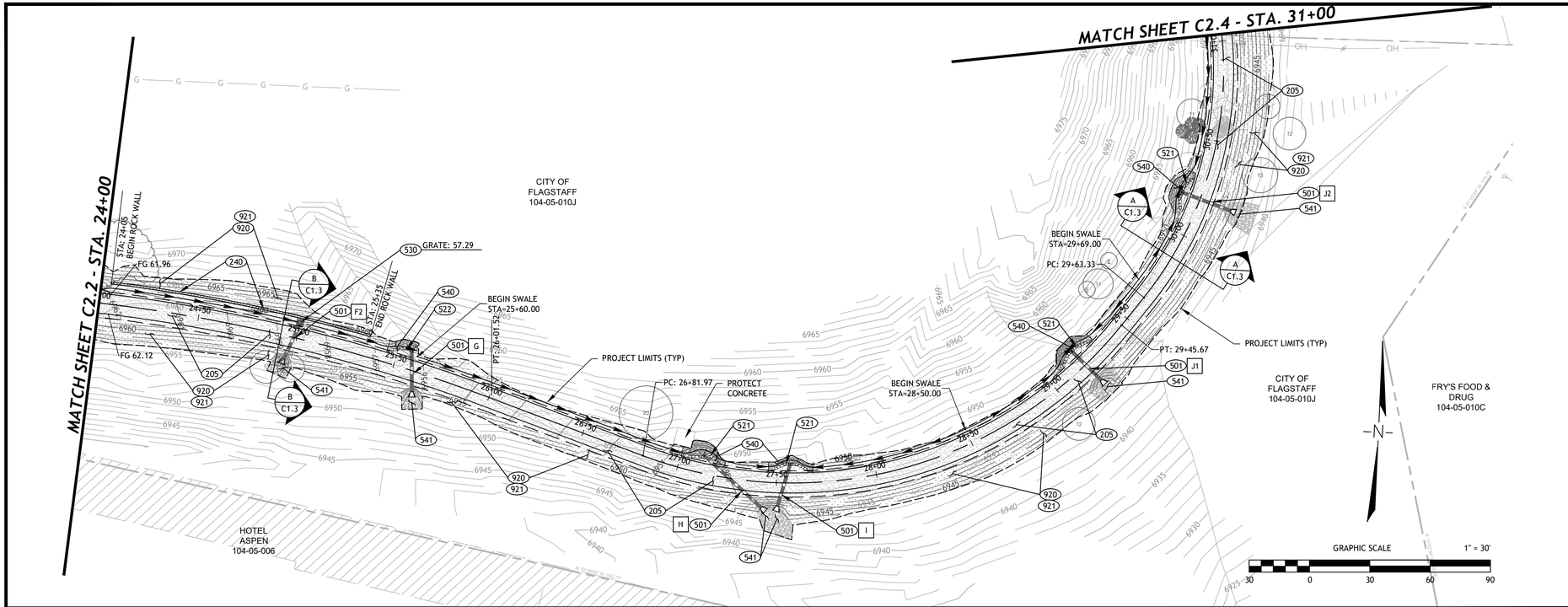
CITY OF FLAGSTAFF
FUTS - SWITZER CANYON TRAIL
FUTS STA 17+00 TO 24+00

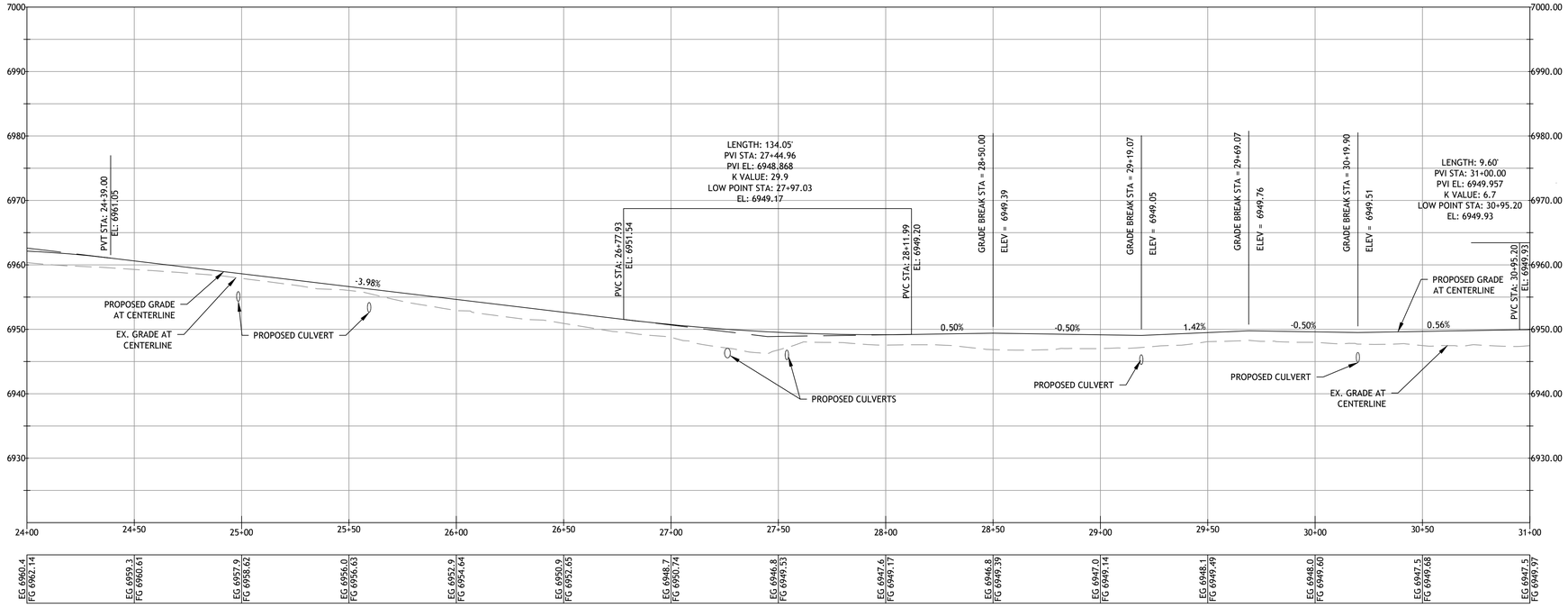
COF PROJECT NO. 03-16013 & ST3023 | PZ-23-00058

C2.2

JOB NO: 16COF03/22COF03 | BY: CAL/DCW
DATE: MARCH 2025 | CHECKED: TES



PROFILE VIEW
HORIZ. SCALE 1" = 30'
VERT. SCALE 1" = 10'



X - Culvert per Culvert Table, Sheet C4.0

CONSTRUCTION NOTES

REMOVALS (000)

See Sheet C5.0 for tree removal.

CONSTRUCTION (200)

NOTE: All concrete shall conform to City of Flagstaff Revision to the MAG Uniform Standard Specifications Section 13-21-001-0725.1, Class A Concrete with 5% to 7% entrained air.

NOTE 205 779 SY
4" Aggregate Surface / 6" Dirty Cinders per COF Engineering Det. 14-02-002 and Sections A-A and B-B, Sheet C1.3. Aggregate modified per Detail D, Sheet C1.2.

NOTE 240 396 SF (Exposed Face)
Stacked rock wall per Detail F, Sheet C1.2.

DRAINAGE CONSTRUCTION (500)

NOTE: All concrete shall conform to City of Flagstaff Revision to the MAG Uniform Standard Specifications Section 13-21-001-0725.1, Class A Concrete with 5% to 7% entrained air.

NOTE 501 150 LF
18" CMP Storm Drain, 14-gauge, aluminized steel type 2 per Table A, Sheet C4.0. Includes end treatment per Detail E, Sheet C1.2 (unless Type 'G' catch basin - Note 531, is called out). Trenching per City of Flagstaff Engineering Det. 9-01-031 & 9-01-032. Installation includes brown carsonite markers both sides of the trail and culvert per COF Engineering Det. 14-01-010. For double culvert installations provide minimum 24" separation from outside of pipe to outside of pipe.

NOTE 521 4 EA
Type 'Straight' stacked rock headwall per Detail H, Sheet C1.2.

NOTE 522 1 EA
Type 'L' stacked rock headwall per Detail G, Sheet C1.2.

NOTE 530 1 EA
Type 'G' catch basin per MAG Detail 537.

NOTE 540 417 SF
Flowline riprap, D_{50}= 8", 16" deep and vertical placed riprap, 6" - 12" dia. on geotextile fabric per Detail G, H, I and N, Sheet C1.2.

NOTE 541 764 SF
Riprap, D_{50}= 8", 16" deep on geotextile fabric per Details E, Sheet C1.2. Place boulders directly in the flow line of the culvert.

OTHER CONSTRUCTION (900)

NOTE 920 12,950 SF
Seed mulch per City of Flagstaff Engineering Standard 13-17-002-0003. all erosion control blanket on cut and fill slopes greater than 6' in height.

NOTE 921 1,439 SY
Hydraulically applied bonded fiber matrix, Flexterra-HP-FGM or approved equal. Install erosion control blanket on cut and fill slopes greater than 6' in height.

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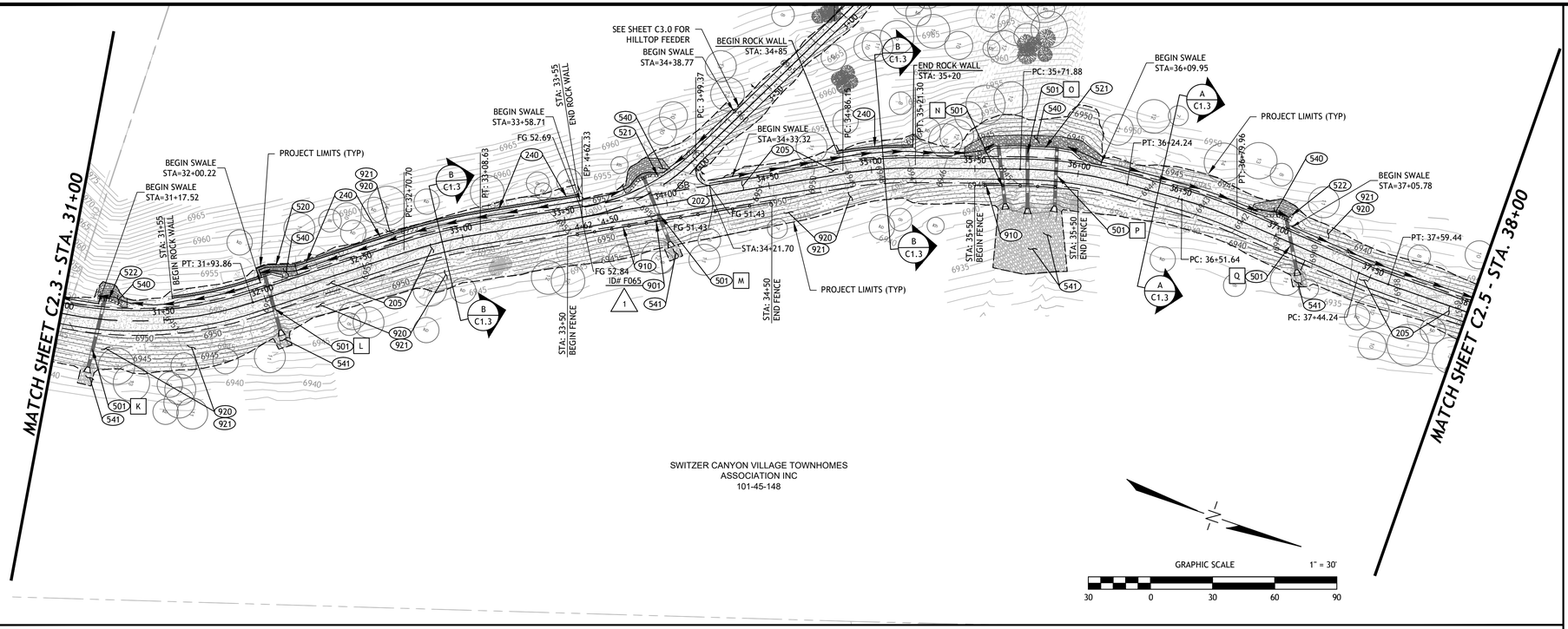
JOB NO: 16COF03/22COF03 | BY: CAL/DCW

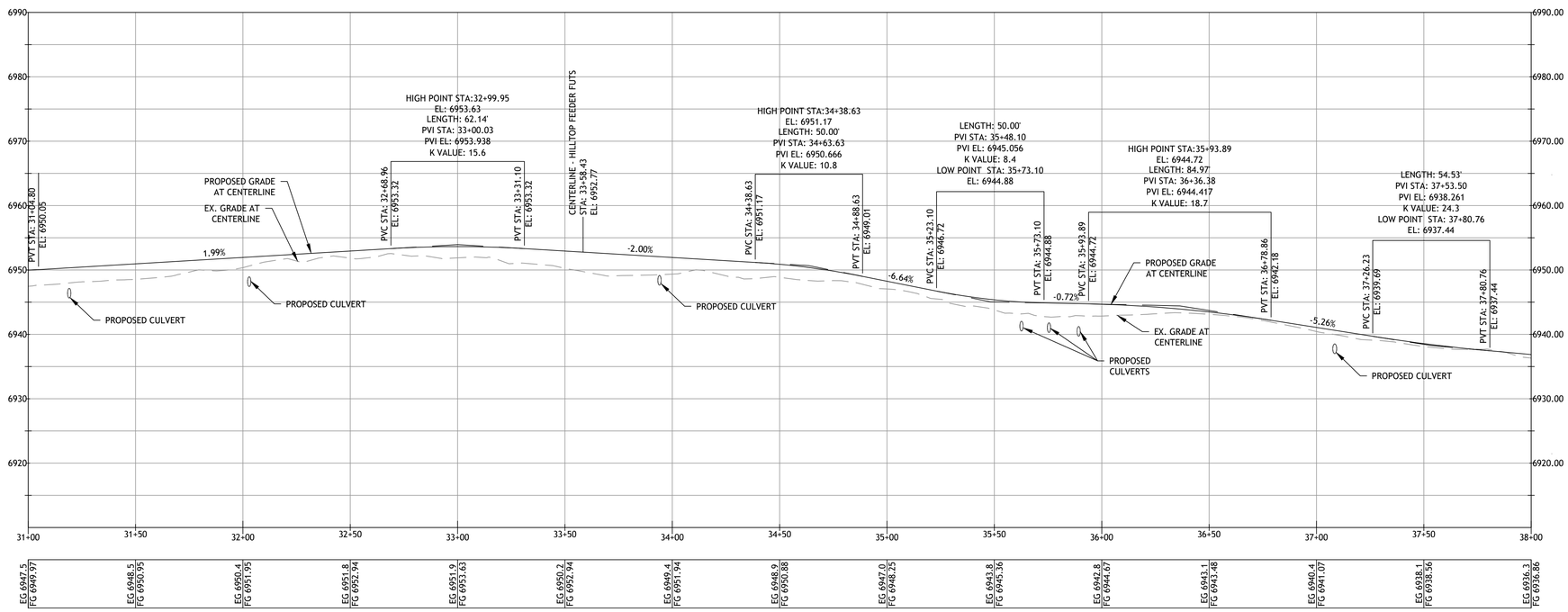
DATE: MARCH 2025 | CHECKED: TES

C2.3

FINAL PLANS



PROFILE VIEW
HORIZ. SCALE 1" = 30'
VERT. SCALE 1" = 10'



CONSTRUCTION NOTES

REMOVALS (000)

See Sheet C5.1 for tree removal.

CONSTRUCTION (200)

NOTE: All concrete shall conform to City of Flagstaff Revision to the MAG Uniform Standard Specifications Section 13-21-001-0725.1, Class A Concrete with 5% to 7% entrained air.

NOTE 202 635 SF
6" PCC / 4" ABC trail section per Detail B, Sheet C1.2, Section C-C, Sheet C1.3, and COF Engineering Det. 14-02-001. Joints and doweling per COF Engineering Det. 14-02-005.

NOTE 205 708 SY
4" Aggregate Surface / 6" Dirty Cinders per COF Engineering Det. 14-02-002 and Sections A-A and B-B, Sheet C1.3. Aggregate modified per Detail D, Sheet C1.2.

NOTE 240 630 SF
Stacked rock wall per Detail F, Sheet C1.2.

DRAINAGE CONSTRUCTION (500)

NOTE: All concrete shall conform to City of Flagstaff Revision to the MAG Uniform Standard Specifications Section 13-21-001-0725.1, Class A Concrete with 5% to 7% entrained air.

NOTE 501 208 LF
18" CMP Storm Drain, 14-gauge, aluminized steel type 2 per Table A, Sheet C4.0. Includes end treatment per Detail E, Sheet C1.2 (unless Type 'G' catch basin - Note 531, is called out). Trenching per City of Flagstaff Engineering Det. 9-01-031 & 9-01-032. Installation includes brown carsonite markers both sides of the trail and culvert per COF Engineering Det. 14-01-010. For double culvert installations provide minimum 24" separation from outside of pipe to outside of pipe.

NOTE 520 1 EA
Type 'U' stacked rock headwall per Detail I, Sheet C1.2.

NOTE 521 2 EA
Type 'Straight' stacked rock headwall per Detail H, Sheet C1.2.

NOTE 522 2 EA
Type 'L' stacked rock headwall per Detail G, Sheet C1.2.

NOTE 540 869 SF
Flowline riprap, D_{50}= 8", 16" deep and vertical placed riprap, 6" - 12" dia. on geotextile fabric per Detail G, H, I and N, Sheet C1.2.

NOTE 541 1326 SF
Riprap, D50= 8", 16" deep on geotextile fabric per Details E, Sheet C1.2. Place a minimum of four 18"-36" boulders directly in the flow line of the culvert.

OTHER CONSTRUCTION (900)

NOTE 901 1 EA
Sign post, foundation, sign installation/attachment. City of Flagstaff will furnish sign, sign hardware, and post to the Contractor. Contractor shall install post, concrete footing, hardware, & sign per Table 1, Sheet C1.1; Detail Q, Sheet C1.3; City of Flagstaff Engineering Detail 14-01-010.

NOTE 910 150 LF
Rail fence per City of Flagstaff Engineering Detail 14-01-010.

NOTE 920 14,905 SF
Seed mulch per City of Flagstaff Engineering Standard 13-17-002-0003.

NOTE 921 1,657 SY
Hydraulically applied bonded fiber matrix, Flexterra-HP-FGM or approved equal. Install erosion control blanket on cut and fill slopes greater than 6' in height.

X - Culvert per Culvert Table, Sheet C4.0

FINAL PLANS

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

REVISION	DESCRIPTION	DATE

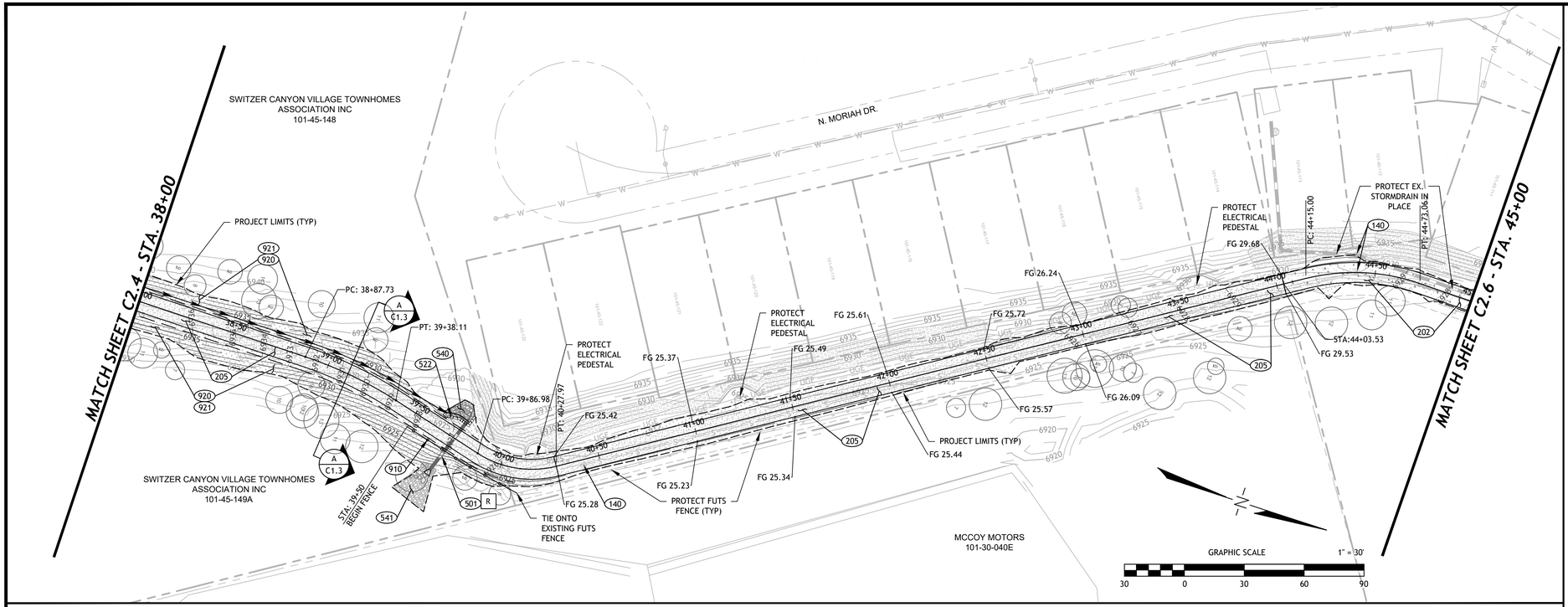
Peak ENGINEERING, INC.
Connecting Place to People
201 E Birch Ave. Suite 3
Flagstaff, AZ 86001
(928) 774-4046

CITY OF FLAGSTAFF
FUTS - SWITZER CANYON TRAIL
FUTS STA 31+00 TO 38+00

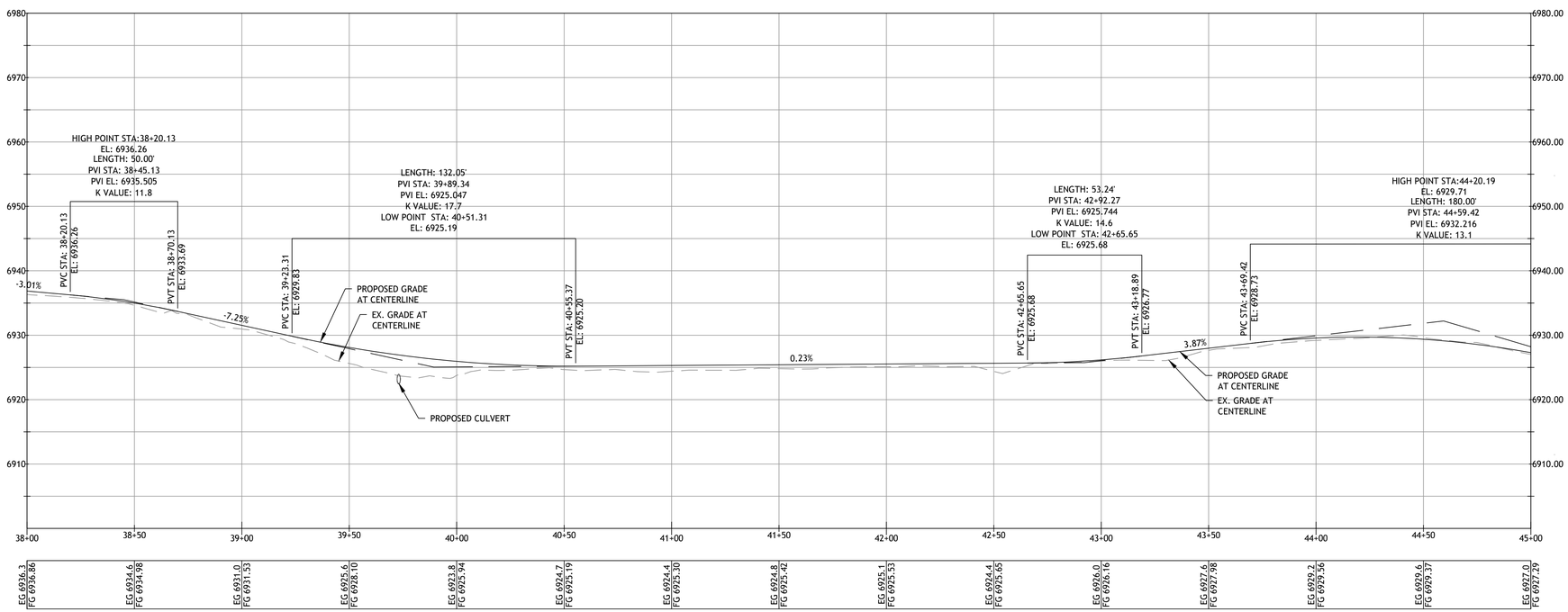
COF PROJECT NO. 03-16013 & ST3023 | PZ-23-00058

JOB NO: 16COF03/22COF03 | BY: CAL/DCW
DATE: MARCH 2025 | CHECKED: TES

C2.4



PROFILE VIEW
HORIZ. SCALE 1" = 30'
VERT. SCALE 1" = 10'



X - Culvert per Culvert Table, Sheet C4.0

CONSTRUCTION NOTES

REMOVALS (000)

See Sheet C5.1. for tree removal.

RELOCATIONS & ADJUSTMENTS (100)

NOTE 140 3 EA
Adjust manhole to finished grade per COF Engineering Det. 9-03-062.

CONSTRUCTION (200)

NOTE: All concrete shall conform to City of Flagstaff Revision to the MAG Uniform Standard Specifications Section 13-21-001-0725.1, Class A Concrete with 5% to 7% entrained air.

NOTE 202 1,000 SF
6" PCC / 4" ABC trail section per Detail B, Sheet C1.2, Section C-C, Sheet C1.3, and COF Engineering Det. 14-02-001. Joints and doweling per COF Engineering Det. 14-02-005.

NOTE 205 668 SY
4" Aggregate Surface / 6" Dirty Cinders per COF Engineering Det. 14-02-002 and Sections A-A and B-B, Sheet C1.3. Aggregate modified per Detail D, Sheet C1.2.

DRAINAGE CONSTRUCTION (500)

NOTE: All concrete shall conform to City of Flagstaff Revision to the MAG Uniform Standard Specifications Section 13-21-001-0725.1, Class A Concrete with 5% to 7% entrained air.

NOTE 501 30 LF
18" CMP Storm Drain, 14-gauge, aluminized steel type 2 per Table A, Sheet C4.0. Includes end treatment per Detail E, Sheet C1.2 (unless Type 'G' catch basin - Note 531, is called out). Trenching per City of Flagstaff Engineering Det. 9-01-031 & 9-01-032. Installation includes brown carsonite markers both sides of the trail and culvert per COF Engineering Det. 14-01-010. For double culvert installations provide minimum 24" separation from outside of pipe to outside of pipe.

NOTE 522 1 EA
Type 'L' stacked rock headwall per Detail G, Sheet C1.2.

NOTE 540 102 SF
Flowline riprap, D_{50}= 8", 16" deep and vertical placed riprap, 6" - 12" dia. on geotextile fabric per Detail G, H, I and N, Sheet C1.2.

NOTE 541 259 SF
Riprap, D_{50}= 8", 16" deep on geotextile fabric per Details E, Sheet C1.2. Place a minimum of four 18"-36" boulders directly in the flow line of the culvert.

OTHER CONSTRUCTION (900)

NOTE 910 65 LF
Rail fence per City of Flagstaff Engineering Detail 14-01-010.

NOTE 920 5,460 SF
Seed mulch per City of Flagstaff Engineering Standard 13-17-002-0003.

NOTE 921 607 SY
Hydraulically applied bonded fiber matrix, Flexterra-HP-FGM or approved equal. Install erosion control blanket on cut and fill slopes greater than 6' in height.

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ARIZONA811
Call 811 or click Arizona811.com

REVISION	DESCRIPTION	DATE

Peak ENGINEERING, INC.
Connecting Place to People
201 E Birch Ave. Suite 3
Flagstaff, AZ 86001
(928) 774-4046

REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 42777 THOMAS E. SMITH Date Signed 3/14/25 ARIZONA U.S.A.

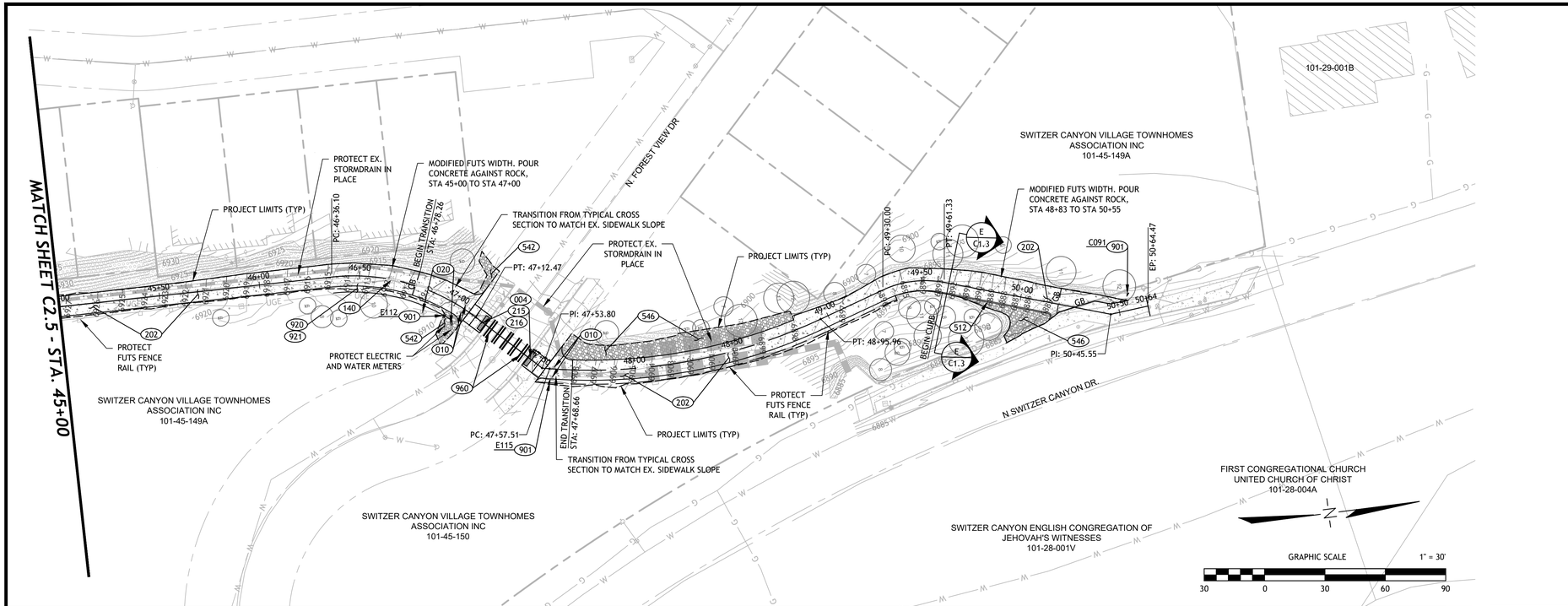
CITY OF FLAGSTAFF
FUTS - SWITZER CANYON TRAIL
FUTS STA 38+00 TO 45+00

COF PROJECT NO. 03-16013 & ST3023 | PZ-23-00058

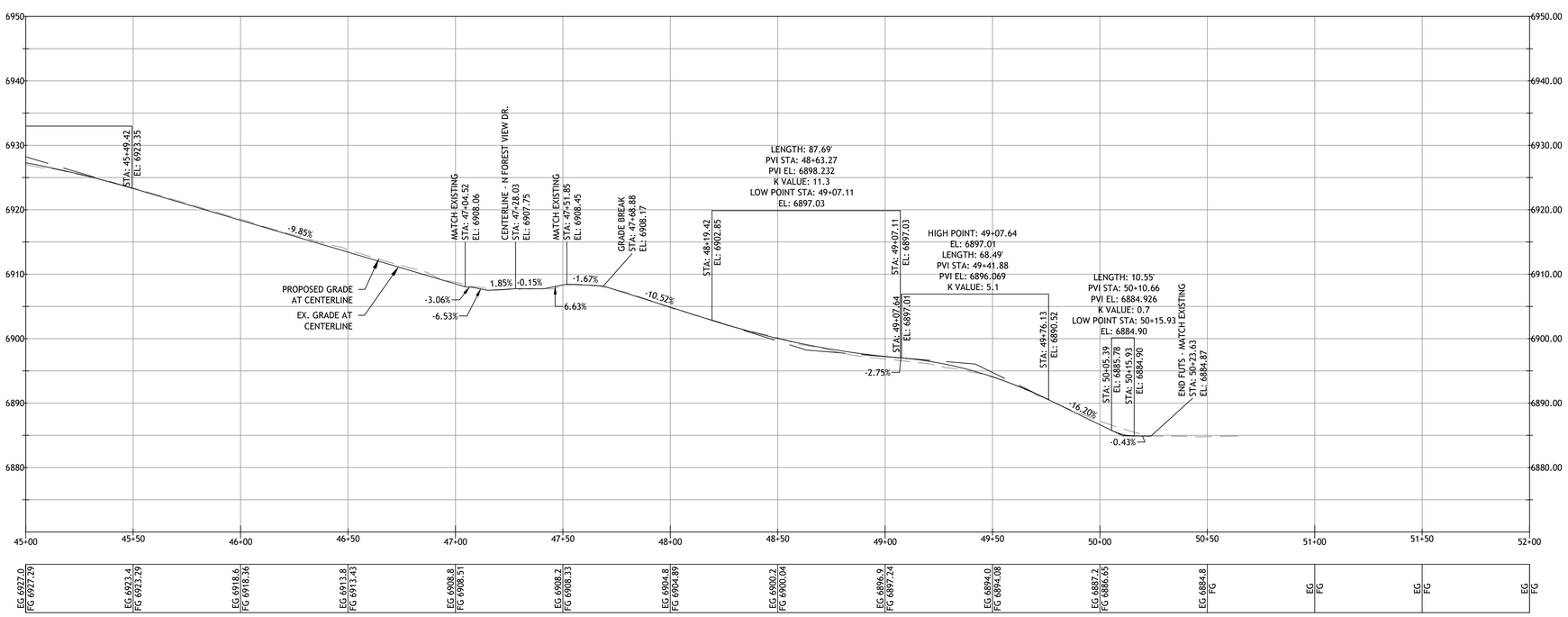
JOB NO: 16COF03/22COF03 | BY: CAL/DCW
DATE: MARCH 2025 | CHECKED: TES

C2.5

FINAL PLANS



PROFILE VIEW
HORIZ. SCALE 1" = 30'
VERT. SCALE 1" = 10'



X - Culvert per Culvert Table, Sheet C4.0

CONSTRUCTION NOTES

REMOVALS (000)

See Sheet C5.1 for tree removal.

NOTE 004 200 SF
Remove and dispose concrete.

NOTE 010 4 EA
Remove and dispose bollards.

Note 020 2 EA
Remove and dispose sign post.

RELOCATIONS & ADJUSTMENTS (100)

NOTE 140 2 EA
Adjust manhole to finished grade per COF Engineering Det. 9-03-062.

NOTE 150 1 EA
Remove & salvage existing signs, remove and dispose of sign post. Set new 2" sign post per Detail Q, Sheet C1.6, and attached signs to new post.

CONSTRUCTION (200)

NOTE: All concrete shall conform to City of Flagstaff Revision to the MAG Uniform Standard Specifications Section 13-21-001-0725.1, Class A Concrete with 5% to 7% entrained air.

NOTE 202 5,400 SF
6" PCC / 4" ABC trail section per Detail B, Sheet C1.2, Section C-C, Sheet C1.3, and COF Engineering Det. 14-02-001. Joints and doweling per COF Engineering Det. 14-02-005.

NOTE 215 430 SF
Concrete curb ramp. Concrete per Detail B, Sheet C1.2.

NOTE 216 2 EA
Cast iron detectable warning per COF Engineering Det. 10-10-043, extending the full width of the curb ramp.

DRAINAGE CONSTRUCTION (500)

NOTE: All concrete shall conform to City of Flagstaff Revision to the MAG Uniform Standard Specifications Section 13-21-001-0725.1, Class A Concrete with 5% to 7% entrained air.

NOTE 512 57 LF
Integral curb per Section E-E and F-F, Sheet C1.3.

NOTE 542 200 SF
Riprap, D_{50}= 6", 16" deep on geotextile fabric per Detail N, Sheet C1.2.

NOTE 546 1,195 SF
Riprap, D_{50}=4", 8" deep, per MAG Spec 220 on geotextile fabric.

OTHER CONSTRUCTION (900)

NOTE 901 3 EA
Sign post, foundation, sign installation/attachment. City of Flagstaff will furnish sign, sign hardware, and post to the Contractor. Contractor shall install post, concrete footing, hardware, & sign per Table 1, Sheet C1.1; Detail Q, Sheet C1.3; City of Flagstaff Engineering Detail 14-01-010.

NOTE 920 300 SF
Seed mulch per City of Flagstaff Engineering Standard 13-17-002-0003.

NOTE 921 34 SY
Hydraulically applied bonded fiber matrix, Flexterra-HP-FGM or approved equal. Install erosion control blanket on cut and fill slopes greater than 6' in height.

NOTE 960 1 EA
10' Crosswalk striping per City of Flagstaff Engineering Det. 16-06-010, Sheet C1.3.

FINAL PLANS

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
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REVISION	DESCRIPTION	DATE

Peak ENGINEERING, INC.
Connecting Place to People
201 E Birch Ave. Suite 3
Flagstaff, AZ 86001
(928) 774-4046

REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 42777 THOMAS E. SMITH Date Signed 3/14/25 ARIZONA U.S.A.

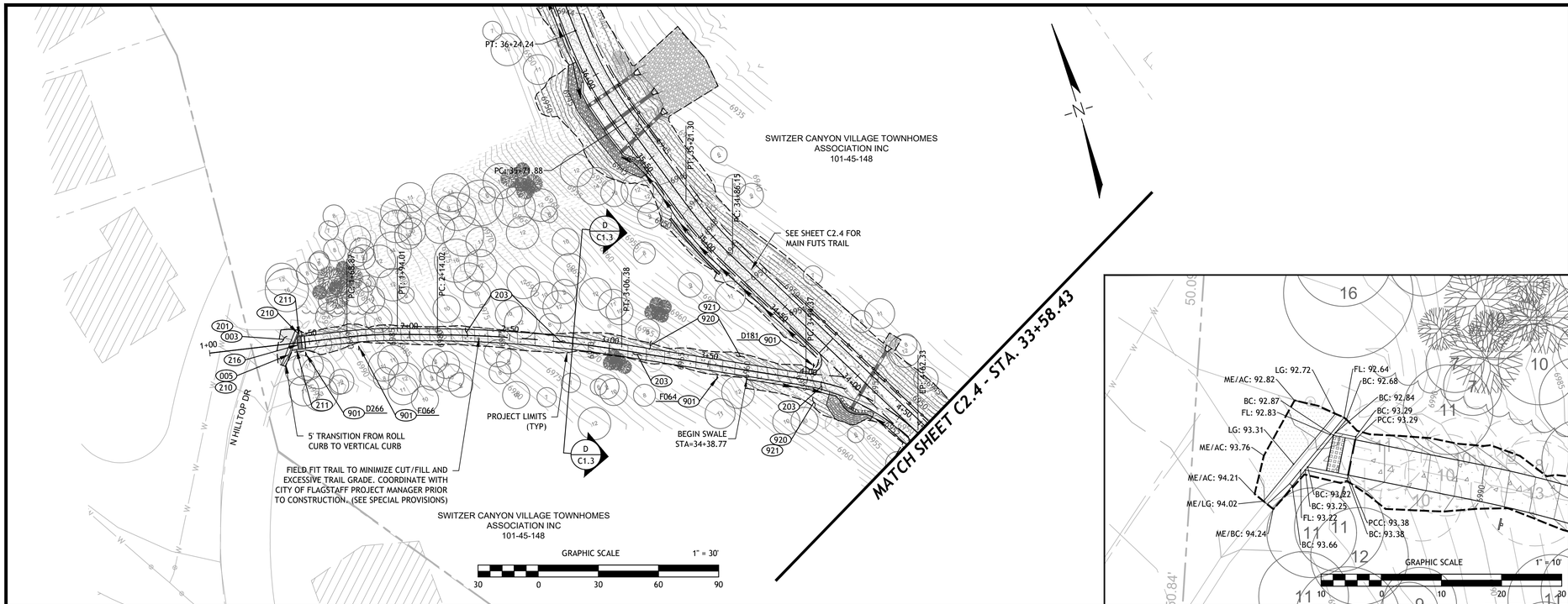
CITY OF FLAGSTAFF
FUTS - SWITZER CANYON TRAIL
FUTS STA 45+00 TO 50+23.63

COF PROJECT NO. 03-16013 & ST3023 | PZ-23-00058

JOB NO: 16COF03/22COF03 | BY: CAL/DCW

DATE: MARCH 2025 | CHECKED: TES

C2.6



CONSTRUCTION NOTES - BID ADD 1

REMOVALS (000)

See Sheet C5.1 for tree removal.

NOTE 003 10 SY
Remove and dispose existing asphalt to a neat sawcut.

NOTE 005 20 LF
Remove and dispose of existing curb and gutter to the nearest joint.

CONSTRUCTION (200)

NOTE: All concrete shall conform to City of Flagstaff Revision to the MAG Uniform Standard Specifications Section 13-21-001-0725.1, Class A Concrete with 5% to 7% entrained air.

NOTE 201 10 SY
3" AC / 6" ABC per Detail A, Sheet C1.2 or match existing asphalt and ABC thickness whichever is greater.

NOTE 203 1,850 SF (Allowance based on quantity placed)
4" PCC / 4" ABC trail section per Detail C, Sheet C1.2 and Section D-D, Sheet C1.3.

NOTE 210 20 LF
Type A curb & gutter on 3" ABC per MAG Standard Det. 220 and the City of Flagstaff Revision to the MAG Uniform Standard Specifications.

NOTE 211 15 LF
Type A single curb on 3" ABC per MAG Standard Det. 222 and the City of Flagstaff Revision to the MAG Uniform Standard Specifications.

NOTE 216 1 EA
Cast iron detectable warning per COF Engineering Det. 10-10-043, extending the full width of the curb ramp.

OTHER CONSTRUCTION (900)

NOTE 901 4 EA
Sign post, foundation, sign installation/attachment. City of Flagstaff will furnish sign, sign hardware, and post to the Contractor. Contractor shall install post, concrete footing, hardware, & sign per Table 1, Sheet C1.1; Detail Q, Sheet C1.3; City of Flagstaff Engineering Detail 14-01-010.

NOTE 920 1,315 SF
Seed mulch per City of Flagstaff Engineering Standard 13-17-002-0003.

NOTE 921 147 SY
Hydraulically applied bonded fiber matrix, Flexterra-HP-FGM or approved equal. Install erosion control blanket on cut and fill slopes greater than 6' in height.

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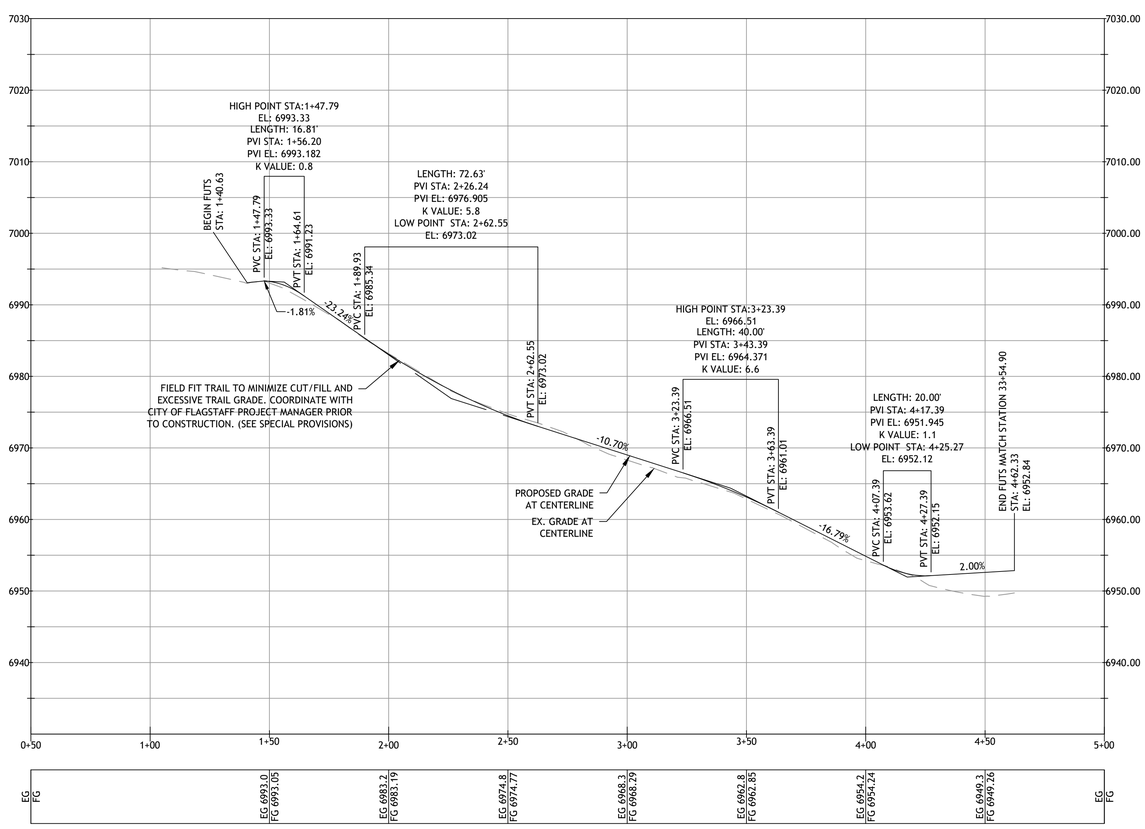
ARIZONA811
Call 811 or click Arizona811.com

REVISION	DESCRIPTION	DATE

PROFILE VIEW
HORIZ. SCALE 1" = 30'
VERT. SCALE 1" = 10'



X - Culvert per Culvert Table, Sheet C4.0

FINAL PLANS

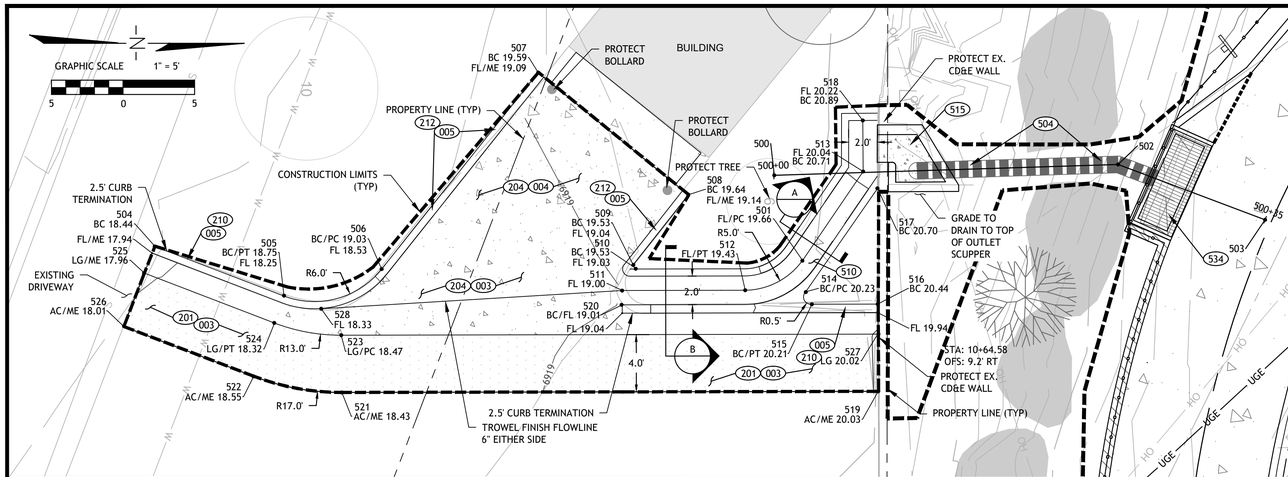
201 E Birch Ave. Suite 3
Flagstaff, AZ 86001
(928) 774-4046
Peak ENGINEERING, INC.
Connecting Place to People

ARIZONA REGISTERED PROFESSIONAL ENGINEER (CIVIL)
42777
THOMAS E. SMITH
Date Signed 3/14/25

CITY OF FLAGSTAFF
FUTS - SWITZER CANYON TRAIL
BID ADD 1 - HILLTOP FEEDER
FUTS STA 1+00 TO 4+62
COF PROJECT NO. 03-16013 & ST3023 | PZ-23-00058

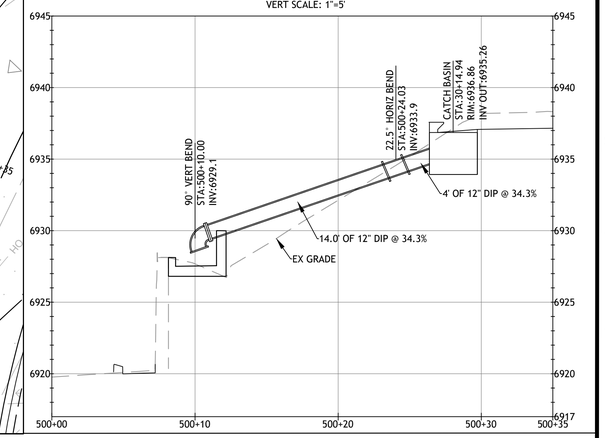
JOB NO: 16COF03/22COF03 | BY: CAL/DCW
DATE: MARCH 2025 | CHECKED: TES

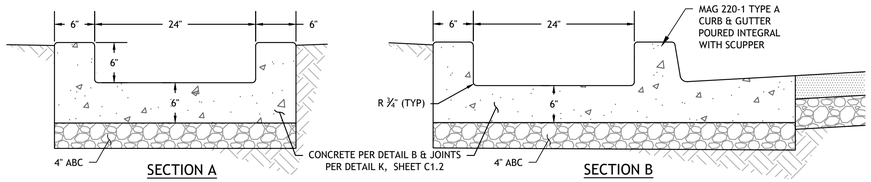
C3.0



WALL STORM DRAIN

HORIZ. SCALE: 1"=5'
VERT SCALE: 1"=5'



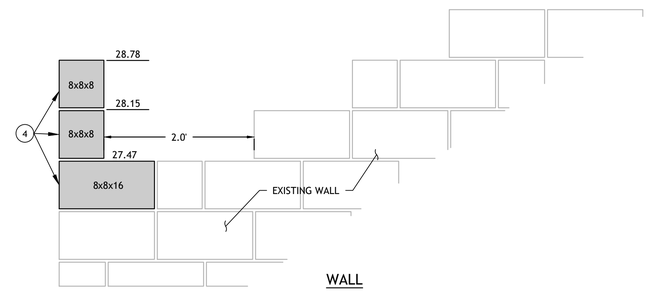


SECTION A

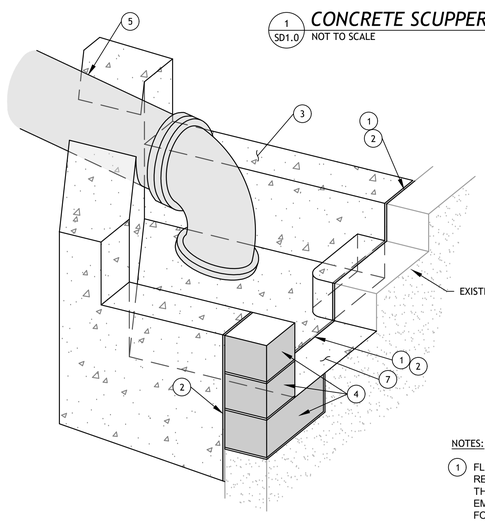
SECTION B

1 / SD1.0 CONCRETE SCUPPER A

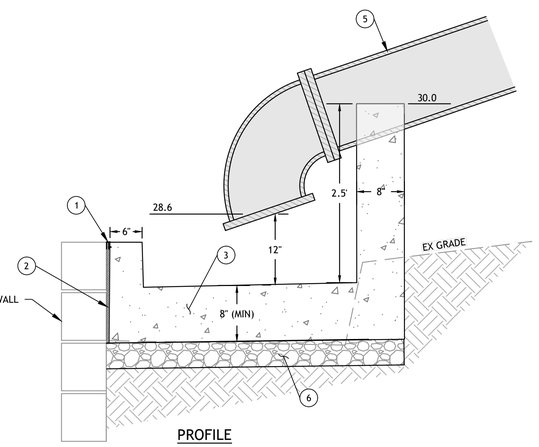
NOT TO SCALE



WALL



ISOMETRIC



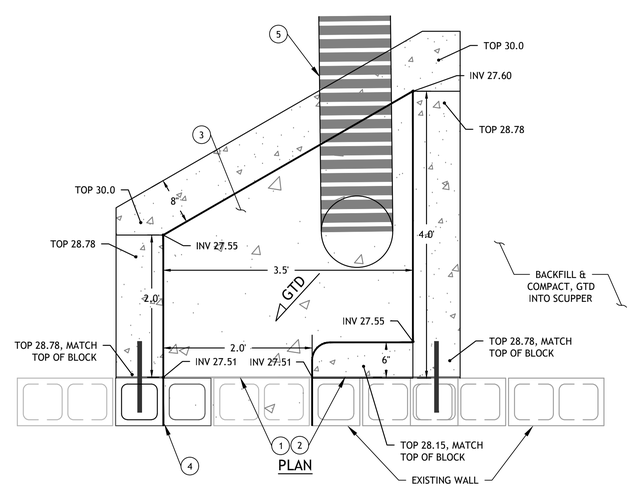
PROFILE

NOTES:

1. FLEXIBLE, MODIFIED PVC JOINT SEAL (GREENSTREAK G-SEAL 617 RETROFIT OR APPROVED EQUAL) FLUSH WITH ADJACENT CONCRETE. THE JOINT SEAL SHALL HAVE A MINIMUM OF TWO FINS ON THE LEG THAT EMBEDS INTO THE ADJACENT CONCRETE (BELOW FINISHED SURFACE) FOR PURPOSES OF ANCHORAGE AND CREATING A WATER STOP.
2. ½" BITUMINOUS PREFORMED EXPANSION JOINT BOARD, ASTM D-1751.
3. CONCRETE PER DETAIL B, SHEET C1.2.
4. SPLIT FACE BLOCK, MATCH EXISTING COLOR AND TEXTURE. REBAR AND DOWELING PER STRUCTURAL PLANS
5. 12" DUCTILE IRON STORMDRAIN
6. 3" ABC
7. TROWEL FINISH TOP OF BLOCK FLUSH WITH CONCRETE SCUPPER

2 / SD1.0 OUTLET SCUPPER

NOT TO SCALE



PLAN

Point Table			
Point #	Raw Description	Northing	Easting
500	FL/PC - STA:500+00	71239.22	62284.87
501	FL/PC	71241.18	62290.84
502	PI STA:500+27.05	71263.24	62284.11
503	PI STA:500+35.00	71273.51	62287.98
504	BC	71195.93	62289.84
505	BC/PT	71204.97	62293.28

Point Table			
Point #	Raw Description	Northing	Easting
506	BC/PC	71211.79	62291.43
507	BC	71222.72	62277.69
508	BC	71233.21	62286.23
509	BC	71229.37	62291.14
510	BC	71229.54	62291.40
511	FL	71228.59	62292.93

Point Table			
Point #	Raw Description	Northing	Easting
512	FL/PT	71237.19	62292.91
513	FL END	71245.43	62284.61
514	BC/PC	71241.42	62293.04
515	BC/PT	71241.84	62293.89
516	BC END	71246.44	62293.88
517	BC END	71246.42	62285.78

Point Table			
Point #	Raw Description	Northing	Easting
518	BC END	71245.40	62281.04
519	AC/ME	71246.48	62299.97
520	BC/FL	71228.55	62293.93
521	AC/ME	71209.01	62300.05
522	AC/ME	71202.83	62298.92
523	LG/PC	71208.96	62296.05

Point Table			
Point #	Raw Description	Northing	Easting
524	LG/PT	71204.29	62295.19
525	LG/ME	71195.19	62291.71
526	AC/ME	71193.79	62295.42
527	LG	71246.50	62295.97
528	FL	71207.57	62294.20

CONSTRUCTION NOTES

REMOVALS (000)

NOTE 003 25 SY
Remove and dispose existing asphalt to a neat sawcut.

NOTE 004 115 SF
Remove and dispose concrete.

NOTE 005 65 LF
Remove and dispose of existing curb and gutter to the nearest joint.

CONSTRUCTION (200)

NOTE: All concrete shall conform to City of Flagstaff Revision to the MAG Uniform Standard Specifications Section 13-21-001-0725.1, Class A Concrete with 5% to 7% entrained air.

NOTE 201 25 SY
3" AC / 6" ABC per Detail A, Sheet C1.2 or match existing asphalt and ABC thickness whichever is greater.

NOTE 204 250 SF
6" PCCP/ 4" ABC per Detail B, Sheet C1.2, joints per Detail K, Sheet C1.2.

NOTE 210 28 LF
Type A curb & gutter on 3" ABC per MAG Standard Det. 220 and the City of Flagstaff Revision to the MAG Uniform Standard Specifications. Includes curb terminations per MAG Standard Detail 222.

NOTE 211 45 LF
Type A single curb on 3" ABC per MAG Standard Det. 222 and the City of Flagstaff Revision to the MAG Uniform Standard Specifications.

NOTE 212 33 LF
6" integral curb.

DRAINAGE CONSTRUCTION (500)

NOTE: All concrete shall conform to City of Flagstaff Revision to the MAG Uniform Standard Specifications Section 13-21-001-0725.1, Class A Concrete with 5% to 7% entrained air.

NOTE 504 17 LF
12" Class 350 DIP Storm Drain. Installation includes restraint fittings, Meg-a-lug or approved equal and anchors per structural details.

NOTE 510 125 SF
Concrete scupper A per Detail 1, this sheet.

NOTE 515 1 EA
Outlet scupper per Detail 2, this sheet and structural plans. Includes additional split face block installation.

NOTE 534 1 EA
Catch Basin Type 1 - Double per ADOT Detail C-15.10, modified as follows: minimum slope of bottom/floor 25% or 6" toward outlet pipe.

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ARIZONA811
Call 811 or click Arizona811.com

REVISION	DESCRIPTION	DATE

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Connecting Place to People
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Flagstaff, AZ 86001
(928) 774-4046

REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 42777 THOMAS E. SMITH Date Signed 3/14/25 ARIZONA U.S.A.

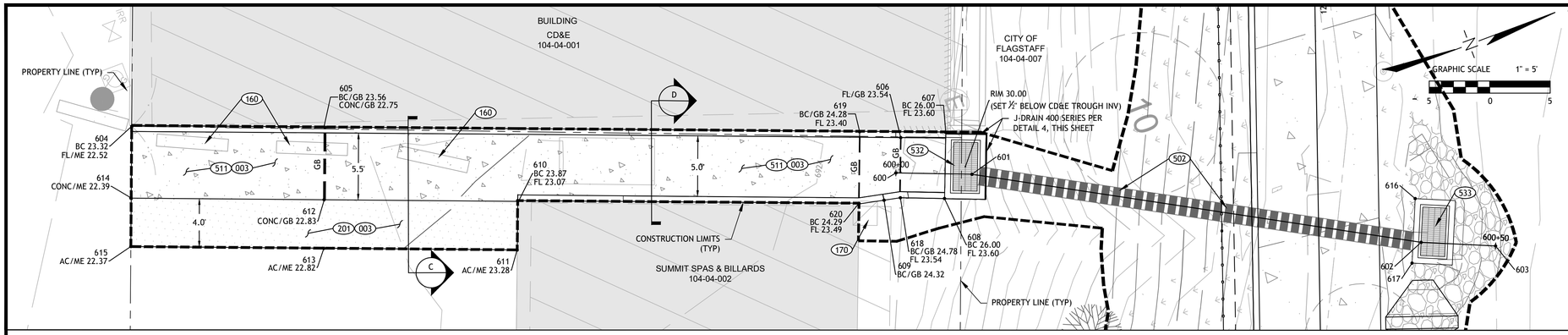
CITY OF FLAGSTAFF
FUTS - SWITZER CANYON TRAIL
DRAINAGE IMPROVEMENTS

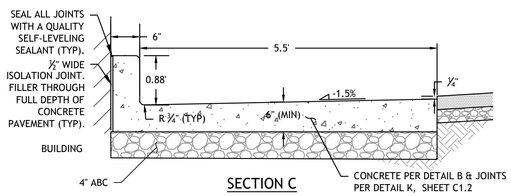
COF PROJECT NO. 03-16013 & ST3023 | PZ-23-00058

JOB NO: 16COF03/22COF03 | BY: CAL/DCW | CHECKED: TES | DATE: MARCH 2025

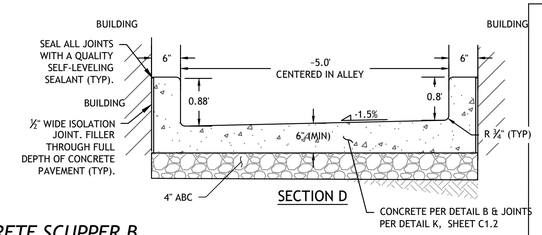
SD1.0

FINAL PLANS



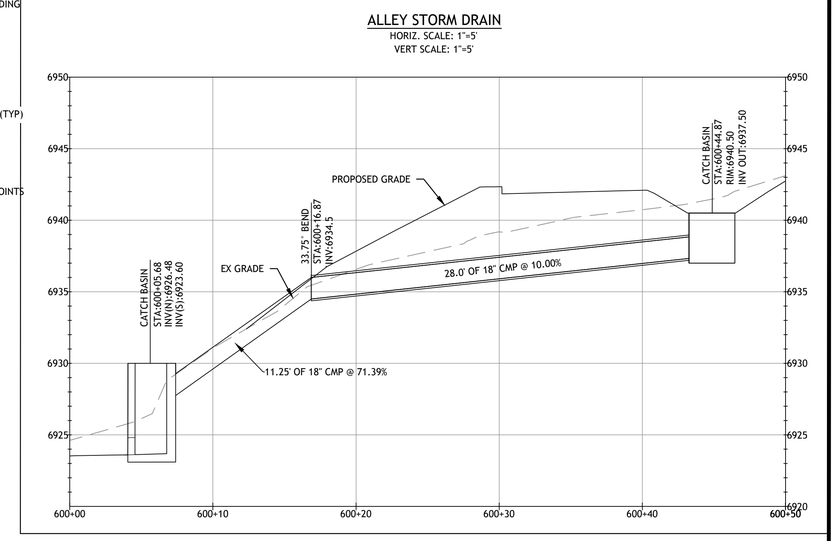


SECTION C

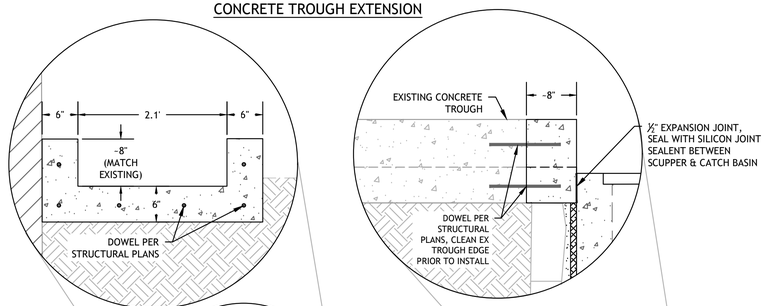


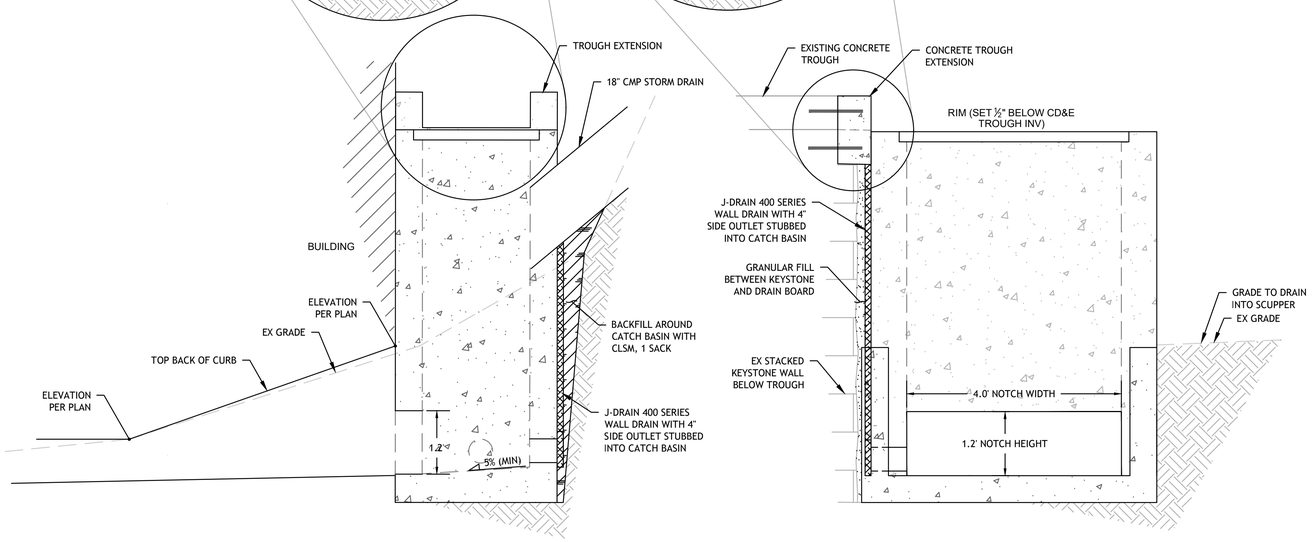
SECTION D

3 SD1.1 *CONCRETE SCUPPER B*
NOT TO SCALE



CONCRETE TROUGH EXTENSION





4 SD1.1 *MODIFIED MAG 537 DOUBLE CATCH BASIN*
NOT TO SCALE

Point Table			
Point #	Raw Description	Northing	Easting
600	STA:600+00	71215.73	62474.95
601	PI STA:600+06.29	71221.58	62477.26
602	PI STA:600+43.84	71254.38	62495.53
603	STA:600+50.00	71260.04	62497.97
604	BC	71157.98	62449.20
605	BC/GB	71172.83	62454.90
606	BC/GB	71217.12	62472.36
607	BC END	71220.76	62473.27
608	BC END	71218.75	62478.34
609	BC/GB	71214.02	62476.72
610	BC	71185.64	62466.15
611	AC/ME	71184.17	62469.95
612	CONC/GB	71170.68	62460.48
613	AC/ME	71169.25	62464.23
614	CONC/ME	71155.76	62454.75
615	AC/ME	71154.36	62458.50
616	CB	71255.19	62491.98
617	CB	71253.08	62496.88
618	BC/GB	71215.35	62477.01
619	BC/GB	71214.11	62470.72
620	FL/GB	71211.99	62476.25

CONSTRUCTION NOTES

REMOVALS (000)

NOTE 003 35 SY
Remove and dispose existing asphalt to a neat sawcut.

RELOCATION (100)

NOTE 160 3 EA
Temporarily relocate parking bumper and replace after construction.

NOTE 170 1 LS
Relocate comm pedestal as required for construction. Coordinate with comm utility.

CONSTRUCTION (200)

NOTE: All concrete shall conform to City of Flagstaff Revision to the MAG Uniform Standard Specifications Section 13-21-001-0725.1, Class A Concrete with 5% to 7% entrained air.

NOTE 201 14 SY
3" AC / 6" ABC per Detail A, Sheet C1.2 or match existing asphalt and ABC thickness whichever is greater.

DRAINAGE CONSTRUCTION (500)

NOTE: All concrete shall conform to City of Flagstaff Revision to the MAG Uniform Standard Specifications Section 13-21-001-0725.1, Class A Concrete with 5% to 7% entrained air.

NOTE 502 40 LF
18" Polymer coated CMP Storm Drain, 14-gauge, aluminized steel type 2 per Table A, Sheet C4.0. Includes blocking per structural plans. All joints shall include H-12 Hugger Bands, flat gaskets, and rods and lugs for pull-part resistance. Rod and lugs shall be installed per Contech CMP Levee Band Installation Guide. Trenching per City of Flagstaff Engineering Det. 9-01-031 & 9-01-032.

NOTE 511 360 SF
Concrete Scupper B per Detail 3, this sheet.

NOTE 532 1 EA
Type Double 'G' catch basin and grate per MAG Detail 537, modified per Detail 4, this sheet and the structural plans.

NOTE 533 1 EA
Type 'G' catch basin and grate per MAG Detail 537, modified as follows: minimum slope of bottom/floor 25% or 6" toward outlet pipe.

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

REVISION	DESCRIPTION	DATE

Peak ENGINEERING, INC.
Connecting Place to People
201 E Birch Ave. Suite 3
Flagstaff, AZ 86001
(928) 774-4046

REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 42777 THOMAS E. SMITH Date Signed 3/14/25

CITY OF FLAGSTAFF
FUTS - SWITZER CANYON TRAIL
DRAINAGE IMPROVEMENTS

COF PROJECT NO. 03-16013 & ST3023 | PZ-23-00058

JOB NO: 16COF03/22COF03 | BY: CAL/DCW
DATE: MARCH 2025 | CHECKED: TES

SD1.1

FINAL PLANS

Point Table			
Point #	Raw Description	Northing	Easting
1	PC	71296.25	62260.34
2	PT	71267.87	62317.05
3	PC	71268.46	62415.39
4	PT	71263.55	62444.42
5	PC	71240.80	62508.54
6	PT	71234.66	62538.72
7	PC	71228.08	62647.97
8	PT	71194.73	62753.22
9	PC	71127.44	62862.11
10	PT	71101.42	62928.22
11	PC	71072.13	63075.45
12	PT	71077.14	63131.54
13	PC	71084.81	63151.07
14	PT	71091.70	63190.33
15	PC	71087.51	63346.35
16	PT	71095.80	63437.39
17	PC	71106.34	63487.24
18	PT	71108.38	63506.48
19	PC	71108.41	63520.91
20	PT	71067.27	63779.27
21	PC	71042.09	63855.68
22	PT	71117.26	64090.66
23	PC	71131.50	64101.11
24	PT	71346.59	64099.60
25	PC	71407.88	64053.26
26	PT	71439.75	64032.76
27	EP/PI	71483.56	64009.08
28	PC	71595.91	63948.34
29	PT	71628.13	63934.41

Point Table			
Point #	Raw Description	Northing	Easting
30	PC	71676.15	63918.51
31	PT	71727.43	63908.70
32	PC	71754.79	63907.10
33	PT	71783.07	63907.46
34	PC	71847.14	63912.82
35	PT	71862.32	63913.51
36	PC	71990.60	63914.47
37	PT	72040.41	63921.15
38	PC	72087.64	63933.69
39	PT	72127.04	63927.71
40	PC	72454.88	63722.02
41	PT	72510.06	63706.75
42	PC	72673.06	63710.06
43	PT	72741.64	63739.23
44	PI	72770.91	63768.42
45	PC	72774.55	63769.17
46	PT	72911.30	63762.09
47	PC	72943.73	63751.76
48	PT	72974.55	63751.92
49	PI	73054.54	63778.30
50	EP	73073.38	63776.62
51	BC	71622.34	63727.27
52	PC	71617.17	63753.11
53	PT	71610.70	63777.39
54	PC	71604.35	63796.36
55	PT	71568.59	63881.42
56	PC	71526.24	63964.21
57	BC	71297.90	62259.12
58	CONTROL	71256.41	62481.23

Point Table			
Point #	Raw Description	Northing	Easting
59	CONTROL	72771.97	63773.36
60	ME/BC	71316.04	62259.23
61	ME/AC	71313.64	62255.89
62	ME/BC	71294.58	62252.95
63	LG	71300.21	62258.88
64	BC/PC	71311.33	62262.46
65	BC/PT	71308.73	62263.18
66	BC/PC	71302.58	62263.31
67	BC/PT	71300.10	62262.10
68	BC	71295.06	62255.00
69	BC/GB	71288.73	62259.35
70	BC/GB	71295.85	62267.70
71	GB/PCC	71285.07	62263.35
72	GB/PCC	71292.10	62270.44
73	BC/DW	71300.11	62269.20
74	ME/DW	71313.99	62269.07
75	BC	71301.65	62263.19
76	RP	71294.36	62254.27
77	RP	71300.13	62252.89
78	FL/RIM	71267.36	62281.75
79	PT/PCC	71279.21	62269.88
80	UT POLE	71295.85	62274.52
81	FL/PC	71296.11	62255.86
82	FL/PT	71295.36	62254.22
83	ME/AC	71299.87	62252.16
84	PI/PCC	71272.56	62277.71
85	FL/RIM	71264.53	62288.10

Curve Table: Alignments			
Curve #	Radius	Length	
C1	70.00	65.81	053°51'47"
C2	85.26	29.60	019°53'17"
C3	109.97	30.90	016°05'51"
C4	226.06	111.54	028°16'10"
C5	200.00	71.42	020°27'41"
C6	100.00	57.09	032°42'34"
C7	100.00	40.13	022°59'42"
C8	389.53	91.63	013°28'39"
C9	94.08	19.38	011°48'07"
C10	819.42	262.74	018°22'17"
C11	210.00	263.70	071°56'52"
C12	180.00	230.52	073°22'40"
C13	250.00	37.93	008°41'32"
C14	200.00	35.15	010°04'09"
C15	200.00	52.36	014°59'56"
C16	200.00	28.32	008°06'42"
C17	200.00	15.20	004°21'12"
C18	200.00	50.38	014°26'02"
C19	50.00	40.99	046°57'59"
C20	100.00	58.07	033°16'08"
C21	100.00	76.37	043°45'29"
C22	270.00	138.45	029°22'47"
C23	50.00	31.33	035°54'18"

A Note on Basis of Bearing and Coordinate System:

Linear Unit: International Foot
Geodetic Datum: North American Datum 1983
System: Arizona LDP (Low Distortion Projection)

Projection: Transverse Mercator
Latitude on grid origin: 35° 00' 00" N
Longitude of Central Meridian: 111° 37' 00" W
Northing at grid origin: 0.000 ft
Easting at Central Meridian: 70,000.000 ft
Central Meridian Scale Factor: 1.000333 (exact)

All distances and bearings shown hereon are grid values based on the preceding projection definition. The projection was defined such that grid distances are equivalent to "ground" distances within the project area.

The Basis of Bearings is Geodetic North based on GPS measurements. These bearings have been rotated to grid for the City of Flagstaff Low Distortion projection. All bearings and distances shown on this map are grid per the preceding definition.

Vertical Datum: NAVD88 (G09) as established via GPS measurements.

Bench Marks:

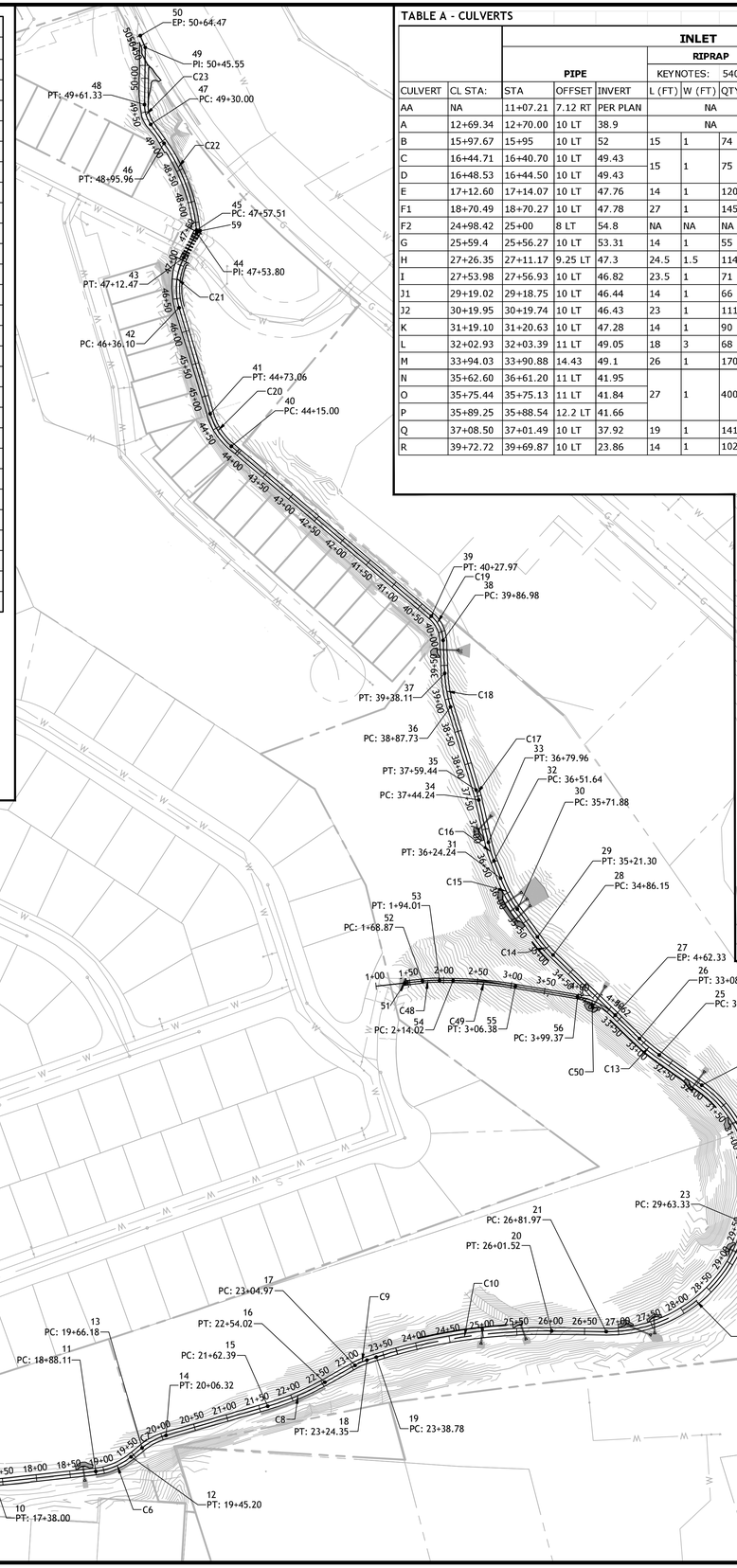
West End: A Found Aluminum cap marked RLS 14671 located at the Southeast corner of APN 101-23-001D and having an elevation of 6943.20.

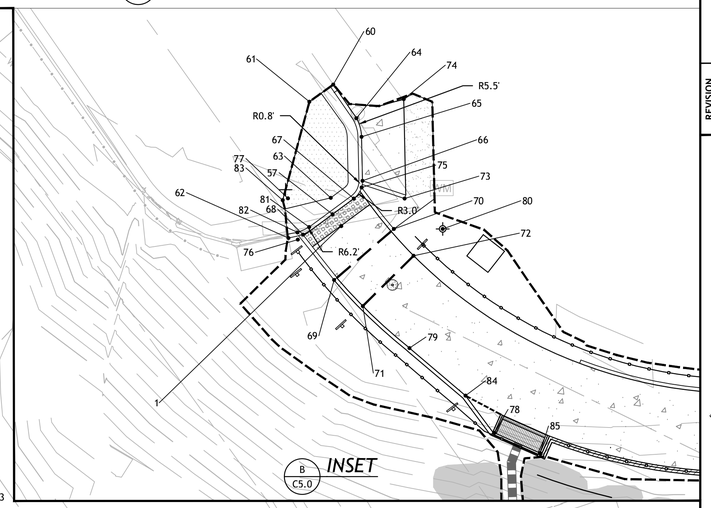
North End: A Found Aluminum cap marked RLA 16630 located at the Centerline PT of Forest View Street and having an elevation of 6907.19.

TABLE A - CULVERTS

		INLET								OUTLET									
		PIPE			RIPRAP KEYNOTES: 540 & 542			HEADWALL		PIPE			OUTLET RIPRAP KEYNOTE: 541			END TREATEMENT			
CULVERT	CL STA:	STA	OFFSET	INVERT	L (FT)	W (FT)	QTY (SF)	TYPE	LENGTH (FT)	STA	OFFSET	INVERT	L (FT)	W (FT)	QTY (SF)	TYPE	RIM	SUMP
AA	NA	11+07.21	7.12 RT	PER PLAN	NA			CB	NA	10+71.77	21.63 RT	PER PLAN	NA			NA	NA	NA
A	12+69.34	12+70.00	10 LT	38.9	NA			CB	NA	12+68.68	10 RT	PER PLAN	NA			CATCH BASIN	NA	NA
B	15+97.67	15+95	10 LT	52	15	1	74	L	17	16+00	10 RT	51.5	16	12	192			
C	16+44.71	16+40.70	10 LT	49.43	15	1	75	L	17.5	16+49.09	11 RT	48.54	14	10	140	CATCH BASIN	51.5	47.54
D	16+48.53	16+44.50	10 LT	49.43						16+52.56	10 RT	48.54				CATCH BASIN	51.5	47.54
E	17+12.60	17+14.07	10 LT	47.76	14	1	120	STRAIGHT	17	17+11.29	10 RT	47.38	12	8	96	END SECTION	NA	NA
F1	18+70.49	18+70.27	10 LT	47.78	27	1	145	STRAIGHT	17.5	18+70.69	10 RT	47.59	14	7	98	END SECTION	NA	NA
F2	24+98.42	25+00	8 LT	54.8	NA	NA	NA	CB	NA	24+96	11.5 RT	53.58	14	7	98	END SECTION	NA	NA
G	25+59.4	25+56.27	10 LT	53.31	14	1	55	L	15.5	25+62.7	10 RT	52.05	10.5	10	105	END SECTION	NA	NA
H	27+26.35	27+11.17	9.25 LT	47.3	24.5	1.5	114	STRAIGHT	18	27+43.26	12.75 RT	43.41	14	16	232	END SECTION	NA	NA
I	27+53.98	27+56.93	10 LT	46.82	23.5	1	71	STRAIGHT	17.5	27+50.88	11.6 RT	43.41				END SECTION	NA	NA
J1	29+19.02	29+18.75	10 LT	46.44	14	1	66	STRAIGHT	16	29+19.29	11 RT	43.6	11	13	143	END SECTION	NA	NA
J2	30+19.95	30+19.74	10 LT	46.43	23	1	111	STRAIGHT	17	29+19.29	11 RT	42.96	15.5	15.5	186	END SECTION	NA	NA
K	31+19.10	31+20.63	10 LT	47.28	14	1	90	L	15	31+16.11	23.6 RT	41.81	10.5	7	74	END SECTION	NA	NA
L	32+02.93	32+03.39	11 LT	49.05	18	3	68	U	11	32+02.24	16.8 RT	45	10.5	8	84	END SECTION	NA	NA
M	33+94.03	33+90.88	14.43	49.1	26	1	170	STRAIGHT	17.5	33+98.11	18.75 RT	45.75	10.5	7	74	END SECTION	NA	NA
N	35+62.60	36+61.20	11 LT	41.95						35+64.74	16.75 RT	38.36			340	END SECTION	NA	NA
O	35+75.44	35+75.13	11 LT	41.84	27	1	400	STRAIGHT	50	35+76.05	18.87 RT	37.77	34	36	340	END SECTION	NA	NA
P	35+89.25	35+88.54	12.2 LT	41.66						35+90.38	17 RT	37.9			340	END SECTION	NA	NA
Q	37+08.50	37+01.49	10 LT	37.92	19	1	141	L	15	37+16.09	10.8 RT	36.02	10.5	7	74	END SECTION	NA	NA
R	39+72.72	39+69.87	10 LT	23.86	14	1	102	L	18	39+71	20 RT	19.73	21	20	259	END SECTION	NA	NA

A C5.0 CULVERT TABLE





B C5.0 INSET

GRAPHIC SCALE 1" = 100'

FINAL PLANS

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

REVISION	DESCRIPTION	DATE

201 E Birch Ave. Suite 3
Flagstaff, AZ 86001
(928) 774-4046
Peak ENGINEERING, INC.
Connecting Place to People

REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 42777 THOMAS E. SMITH Date Signed 3/14/25 ARIZONA U.S.A.

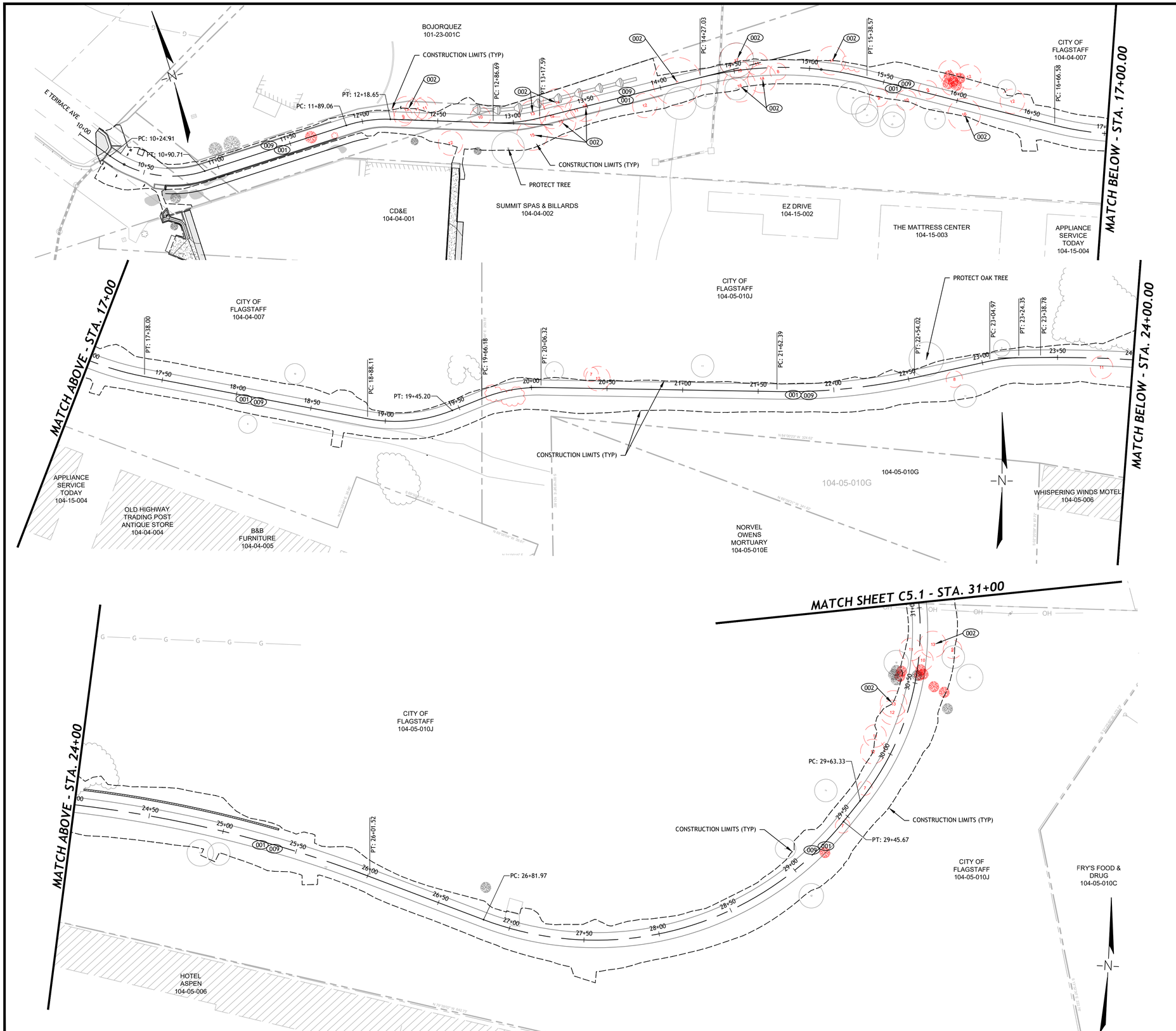
CITY OF FLAGSTAFF
FUTS - SWITZER CANYON TRAIL CONTROL

COF PROJECT NO. 03-16013 & ST3023 | PZ-23-00058

JOB NO: 16COF03/22COF03 | BY: CAL/DCW | CHECKED: TES

DATE: MARCH 2025

C4.0



CONSTRUCTION NOTES

REMOVALS (000)

Tree Removal Note.
Tree diameters used for determining tree removal quantities are based on measurements taken during the project survey conducted August 2024. The tree diameters measured during the survey are shown on the plans within the symbol for each tree. Payment for tree removal will be based on the diameter shown on the plans at the unit bid price. If the tree diameter is not shown on the plans, tree removal will be included in the bid price for clearing and grubbing, regardless of tree diameter at the time of construction.

NOTE 001 1 LS
Clear and grub to grading limits per MAG Specification 201 as modified by the project special provisions. Clearing and grubbing includes removal of trees and stumps less than or equal to 12-inches in diameter, see tree removal note.

NOTE 002 14 EA
Remove and dispose tree and stump greater than 12" diameter per MAG Specification 201 and Table 201-1.

NOTE 009 1 LS
Install tree protection fencing per Detail P, Sheet C1.3. Install protection fencing on the FUTS side of trees within 8-ft of the construction limits and around trees that will remain inside the construction limits for the length of the project. COF shall approve limits of fencing.

KEY

DEMO

X"
(SIZE)

PROTECT

X"
(SIZE)

FINAL PLANS

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

REVISION	DESCRIPTION	DATE

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Flagstaff, AZ 86001
(928) 774-4046
Peak ENGINEERING, INC.
Connecting Place to People

REGISTERED PROFESSIONAL ENGINEER (CIVIL)
CERTIFICATE NO. 42777
THOMAS E. SMITH
Date Signed 3/14/25
ARIZONA U.S.A.

CITY OF FLAGSTAFF
FUTS - SWITZER CANYON TRAIL
TREE REMOVAL
FUTS STA 10+00 TO 31+00
COF PROJECT NO. 03-16013 & ST3023 | PZ-23-00058

JOB NO: 16COF03/22COF03 | BY: CAL/DCW
DATE: MARCH 2025 | CHECKED: TES

C5.0

CONSTRUCTION NOTES

REMOVALS (000)

Tree Removal Note.
Tree diameters used for determining tree removal quantities are based on measurements taken during the project survey conducted August 2024. The tree diameters measured during the survey are shown on the plans within the symbol for each tree. Payment for tree removal will be based on the diameter shown on the plans at the unit bid price. If the tree diameter is not shown on the plans, tree removal will be included in the bid price for clearing and grubbing, regardless of tree diameter at the time of construction.

NOTE 001 1 LS
Clear and grub to grading limits per MAG Specification 201 as modified by the project special provisions. Clearing and grubbing includes removal of trees and stumps less than or equal to 12-inches in diameter, see tree removal note.

NOTE 002 27 EA | 1 EA BID ADD
Remove and dispose tree and stump greater than 12" diameter per MAG Specification 201 and Table 201-1.

NOTE 009 1 LS
Install tree protection fencing per Detail P, Sheet C1.3. Install protection fencing on the FUTS side of trees within 8-ft of the construction limits and around trees that will remain inside the construction limits for the length of the project. COF shall approve limits of fencing.

KEY

DEMO: X" (SIZE)

PROTECT: X" (SIZE)

GRAPHIC SCALE 1" = 30'

30 0 30 60 90

FINAL PLANS

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

REVISION	DESCRIPTION	DATE

Peak ENGINEERING, INC.
Connecting Place to People
201 E Birch Ave. Suite 3
Flagstaff, AZ 86001
(928) 774-4046

Registered Professional Engineer (Civil)
CERTIFICATE NO. 42777
THOMAS E. SMITH
Date Signed 9/4/2025
Expires 9/4/2025

CITY OF FLAGSTAFF
FUTS - SWITZER CANYON TRAIL
TREE REMOVAL
FUTS STA 31+00 TO 50+23.63
COF PROJECT NO. 03-16013 & ST3023 | PZ:-23-00058

JOB NO: 16COF03/22COF03 | BY: CAL/DCW
DATE: MARCH 2025 | CHECKED: TES

C5.1

CITY OF FLAGSTAFF

FLAGSTAFF URBAN TRAIL SYSTEM - SWITZER CANYON TRAIL
E. TERRACE AVE. TO N. SWITZER CANYON DR.
EROSION CONTROL PLAN

COF PROJECT NO. 03-16013 & ST3023

SWPPP GENERAL NOTES:

A copy of the approved plans for this project, together with this Storm Water Pollution Prevention Plan (SWPPP), shall be maintained on the site and available for review. Those elements on the grading and drainage plan, which are pertinent to or referenced by the SWPPP shall be considered a part of the SWPPP.

The party responsible for installing, implementing, and maintaining the SWPPP is _____.
Responsible contact(s): _____at_____ (cell).
Name phone
_____at_____ (cell).
Name phone

The SWPPP shall be posted in a conspicuous location near the construction entrance, and that all operator(s) shall sign and certify the SWPPP they will implement.

Description:
The escape of sediment from the site shall be prevented by the installation of best management practices (BMP's). The facilities and BMP's shown on this plan must be constructed prior to or in conjunction with all clearing and grading activities in such a manner as to ensure that sediment-laden water does not enter the drainage system or violate applicable water standards. These facilities must be installed and in operation prior to any general grading or land clearing. Wherever possible, maintain natural vegetation for silt control.

The total estimated disturbed area for this project is: ±2.3 Acres.

The Contractor is responsible for protecting existing improvements outside of the construction limits. Any damaged improvements shall be replaced by the Contractor at his expense.

Contractor/Operator:
In general terms, operators are those that have the ability to make decisions concerning the project design and details, and those with the ability to make on site decisions concerning site activities and implementation of BMPs. The name(s) and contact information of the SWPPP Operator must be included on the SWPPP.

The operator must be a person knowledgeable in the principles and practice of erosion and sediment controls and who possesses the skills to assess conditions at the site that could impact storm water quality and the effectiveness of the BMPs selected to control the quality of the storm water discharges.

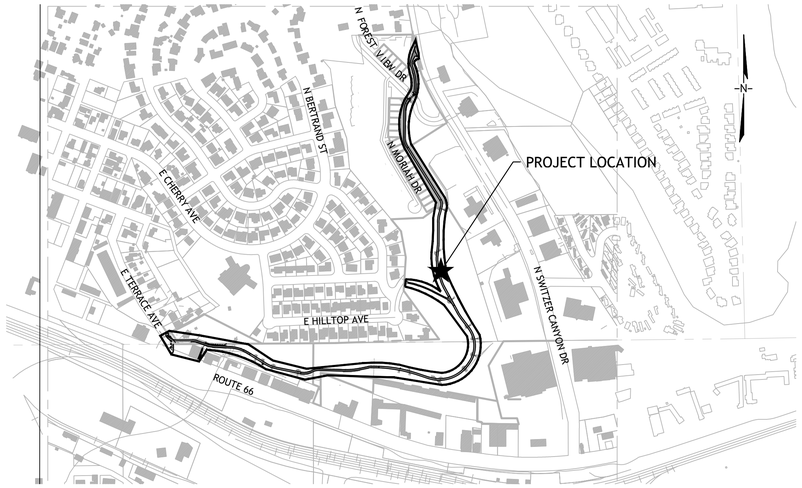
Operator's responsibilities include but are not limited to:
Filing the Notice Of Intent and Notice Of Termination with ADEQ, being familiar with, installing and maintaining BMP's, assigning qualified inspectors to the project to inspect the job during designated rain fall events.

The operator shall implement the SWPPP from initial commencement of construction activity until final stabilization is complete and NOT is filed, or until an NOI transferring the site to a new operator is received by ADEQ. In the event of an Operator change the new operator's name and contact information shall be incorporated into the SWPPP.

The Contractor/Operator is responsible for determining the sequencing of construction activities and installing the appropriate Best Management Practices (BMP's) to fit the construction sequence.

The Contractor/Operator must provide temporary stabilization for disturbed areas within 14 days, or as soon as practical.

NOI/NOT
The Contractor/Operator shall file a Notice of Intent (NOI) a minimum of 7 days prior to construction commencing.



VICINITY MAP
N.T.S.

SWPPP INSPECTION NOTES:

I. Routine Inspection Schedule. The Contractor/Operator must ensure routine inspections are performed at the site to ensure that BMPs are functional and that the SWPPP is being properly implemented. The Contractor/Operator must specify an inspection schedule as part of the SWPPP and may choose either of the following:
a. The site will be inspected at least once every 7 calendar days, or
b. The site will be inspected at least once every 14 calendar days, and also within 24 hours of the end of each storm event of 0.5-inches or greater.

2. Reduced Inspection Frequency. When any of the following conditions apply:
a. The site has been temporarily stabilized;
b. Runoff is unlikely due to winter conditions (e.g., site is covered with snow-ice, or frozen ground exists) or
c. Construction is in an area of the state that receives < 20 inches of average annual rainfall and construction is occurring during the seasonal dry period;
The Contractor/Operator is required to routinely inspect only once each month and anytime rain is predicted and within 24 hours of the end of each storm event of 0.5 inches or greater.

3. Inspectors. Inspections must be done by qualified personnel.
"Qualified personnel" means a person knowledgeable in the principles and practice of erosion and sediment controls and who possesses the skills to assess conditions at the site that could impact storm water quality and the effectiveness of the BMPs selected to control the quality of the storm water discharges.

4. Scope of Inspections. Inspections must include all areas of the site disturbed by construction activity and areas used for storage of materials that are exposed to precipitation. Inspectors must look for evidence of, or the potential for pollutants entering the drainage system. Sedimentation and erosion control measures identified in the SWPPP must be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they must be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Where discharge locations are inaccessible, nearby downstream locations shall be inspected to the extent that the inspections are practicable. Locations where vehicles enter or exit the site must be inspected for evidence of offsite sediment tracking. All BMPs and areas inspected and the conditions found must be documented.

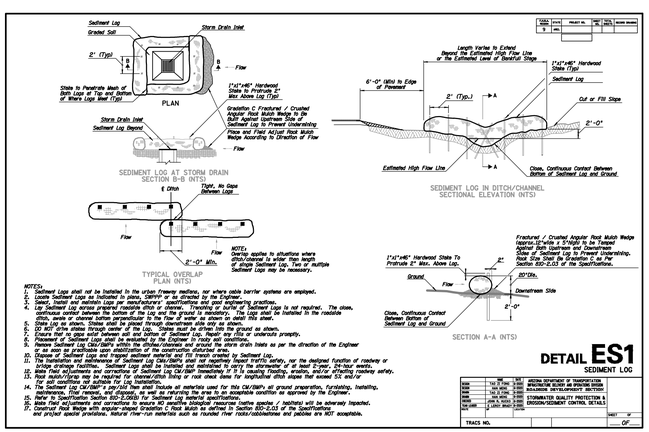
5. Compliance Evaluation Report. For each inspection the operator shall complete an inspection report.
At a minimum the report must include:
a. The inspection date;
b. Name(s) and title(s) and qualifications of person(s) making the inspection. Qualifications must either be on/attached to the report or alternatively, if the SWPPP documents the qualifications of the Inspectors by name that portion of the SWPPP maybe referenced.
c. Weather information for the period since the last inspection (or since commencement of construction activity if the first inspection), including best estimate of the beginning of each storm event duration of each event, time elapsed since last storm event, and approximate amount of rainfall for each event (in inches);
d. Location(s) of discharges of sediment or other pollutants from the site;
e. Location(s) and identification of BMPs that need to be maintained, failed to operate as designed or prove inadequate;
f. Location(s) where additional BMPs that do not exist at the time of inspection are needed;
g. Corrective actions required, including any changes to SWPPP necessary and implementation dates;
h. Identification of all sources of non-storm water and the associated pollution prevention control measures; and
i. Identification of material storage areas and, evidence of, or potential for, pollutant discharge from such areas.

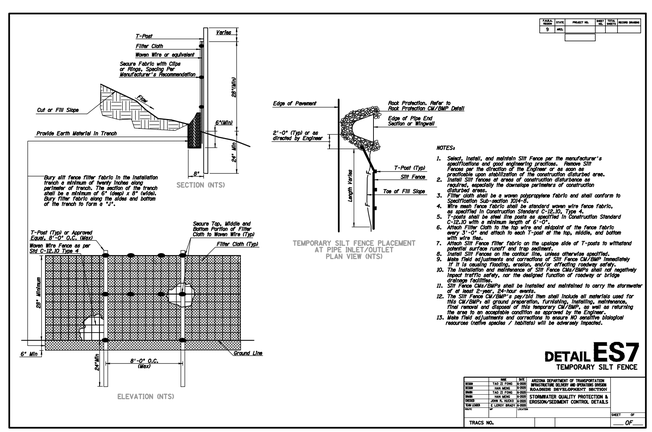
6. Maintaining Inspection Records.
The operator must ensure the inspection report and record of any follow-up actions taken is retained as part of the SWPPP for at least three years from the date that permit coverage expires or is terminated. Inspection reports must identify any noncompliance with the conditions of this permit. Where a report does not identify any incidents of noncompliance, the report must contain a certification that the construction project or site is being operated in compliance with the SWPPP and the permit. The report shall be signed.

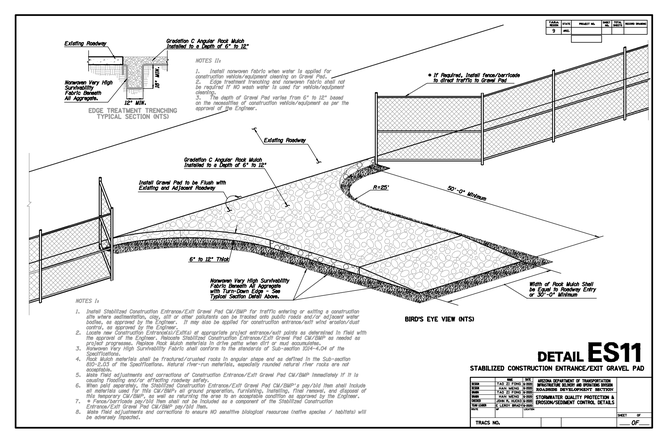
7. Follow-up Actions.
Based on the results of the inspection the operator must modify the SWPPP to include additional or modified BMPs designed to correct problems identified. The operator must complete revisions to the SWPPP within seven calendar days following the inspection. If existing BMPs need to be modified or if additional BMPs are necessary implementation must be completed before the next anticipated storm event. If implementation before the next anticipated storm event is impractical, they shall be implemented as soon as practicable.

8. Maintaining an Updated SWPPP.
The operator must amend the SWPPP within 15 business days whenever:
I. There is a change in design, construction, operation, or maintenance at the construction site that has a significant effect on the discharge of pollutants to the waters of the United States that has not been previously addressed in the SWPPP; or
2.During inspections, monitoring if required, or investigations by the operator or by local, state, MS4, or federal officials, it is determined the discharges are causing or contributing to water quality exceedances or the SWPPP is ineffective in eliminating or significantly minimizing pollutants in storm water discharges from the construction site.

CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE 2025 REVISION TO THE 2020 EDITION OF THE MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) STANDARD SPECIFICATIONS AND DETAILS AND CITY OF FLAGSTAFF ADDENDUM TO MAG SPECIFICATIONS AND DETAILS.







FINAL PLANS

Contact Arizona 811 at least two full working days before you begin excavation
Call 811 or click Arizona811.com

REVISION	DESCRIPTION	DATE

Peak ENGINEERING, INC.
Connecting Place to People
201 E Birch Ave. Suite 3
Flagstaff, AZ 86001
(928) 774-4046

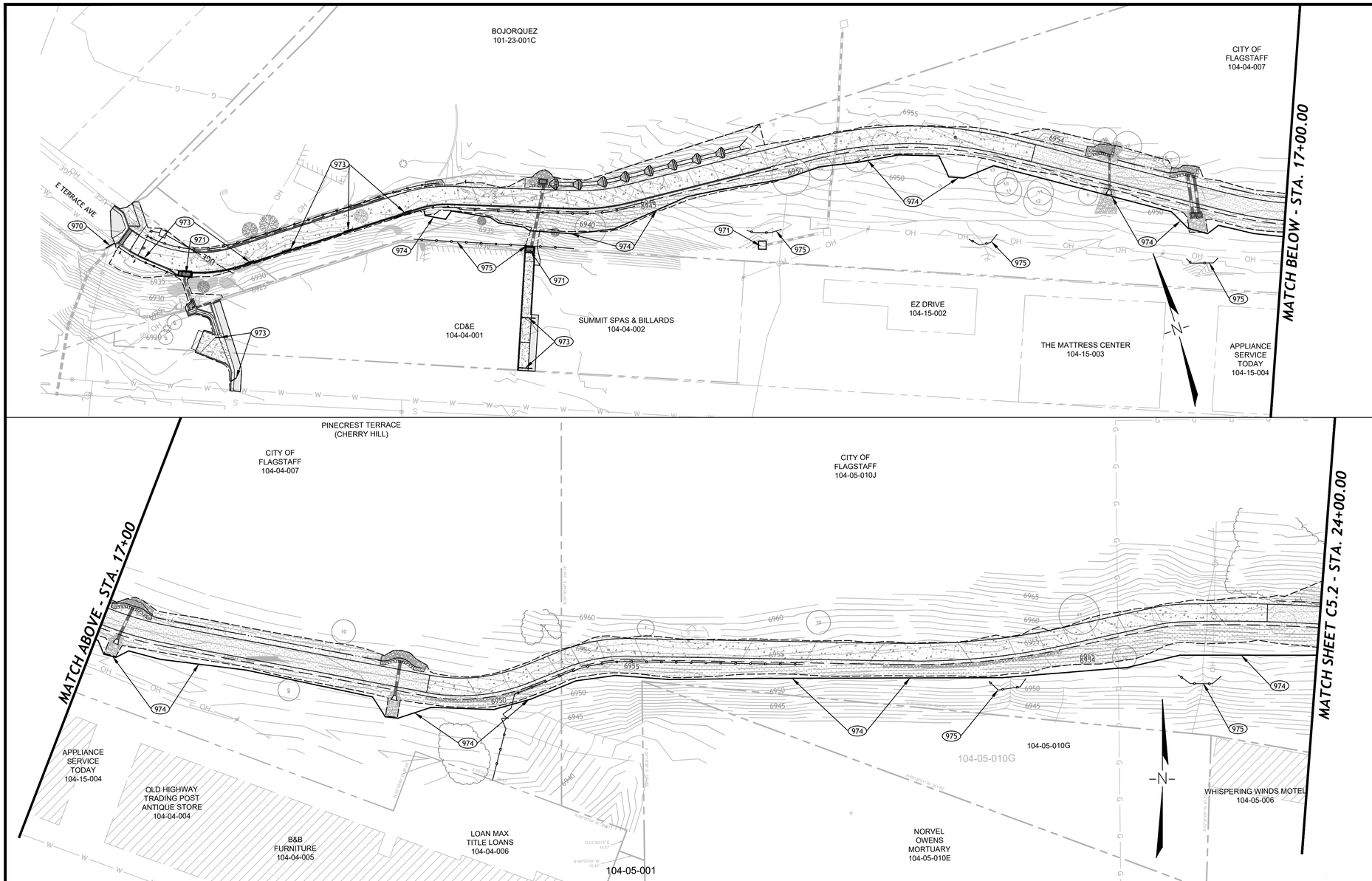
REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 42777 THOMAS E. SMITH Date Signed 3/14/25

CITY OF FLAGSTAFF
FUTS - SWITZER CANYON TRAIL
EROSION CONTROL PLAN

COF PROJECT NO. 03-16013 & ST3023 | PZ-23-00058

C6.0

JOB NO: 16COF03/22COF03 | BY: CALD/DCW
DATE: MARCH 2025 | CHECKED: TES



CONSTRUCTION NOTES

NOTE:
If construction is to take place behind the Route 66 businesses (STA: 10+00 to 30+00) during monsoon season (June 15 - September 30), replace straw wattles with silt fence.

NOTE 970 10 LF
Construct curb inlet protection per Detail 1, this sheet.

NOTE 971 3 EA
Construct catch basin inlet protection per Detail 2, this sheet.

NOTE 972 1 EA
Stabilized construction entrance/exit gravel pad per Detail ES11, sheet C6.0. Coordinate construction entrance location with COF Project Manager.

NOTE 973 50 LF
Place sediment log per Detail ES1, sheet C6.0.

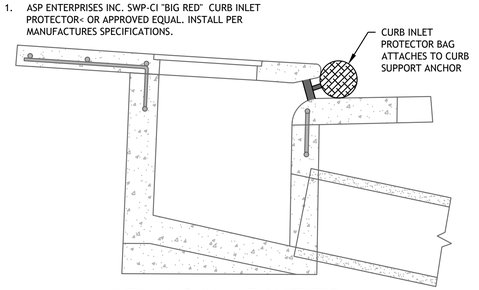
NOTE 974 1,240 LF
Place straw wattles per Detail ES3, this sheet. See Note above.

NOTE 975 200 LF
Construct silt fence per Detail ES7, sheet C6.0. See Note above.

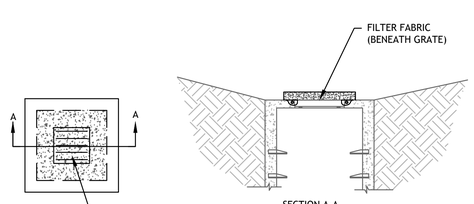
NOTE 980 1 EA
Contractor to coordinate with COF Project Manager for location of designated concrete washout. Concrete washout shall be contained and properly disposed of upon completion of construction.

NOTE:

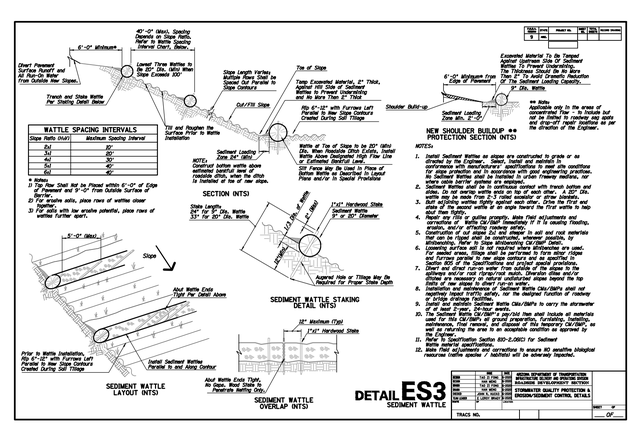
1. ASP ENTERPRISES INC. SWP-CI "BIG RED" CURB INLET PROTECTOR< OR APPROVED EQUAL. INSTALL PER MANUFACTURES SPECIFICATIONS.



DETAIL 1: CURB INLET PROTECTION



DETAIL 2: CATCHBASIN INLET PROTECTION



GRAPHIC SCALE 1" = 30'
30 0 30 60 90

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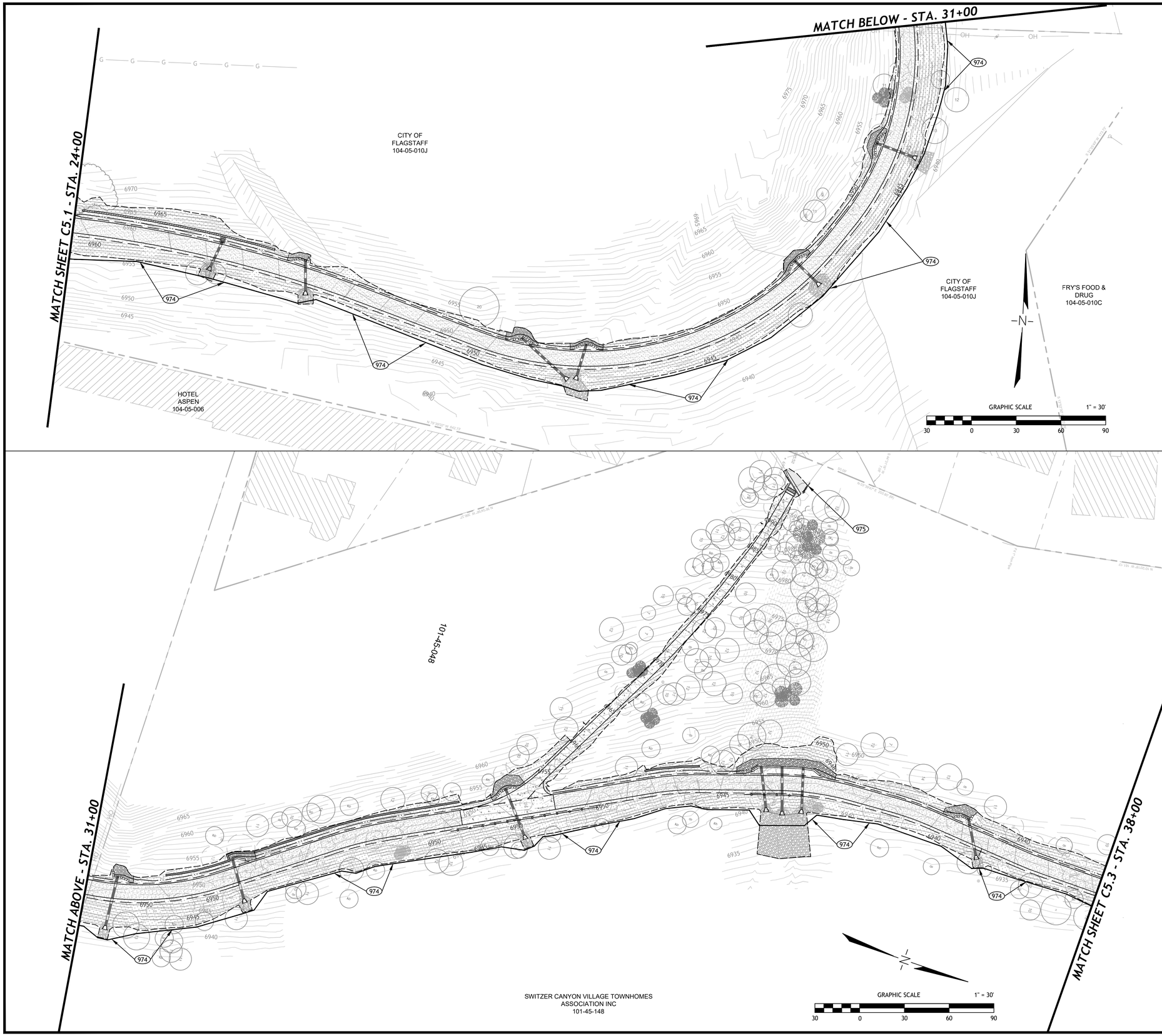
CERTIFICATE NO. 42777
THOMAS E. SMITH
Date Signed 3/14/25
ARIZONA U.S.A.

CITY OF FLAGSTAFF
FUTS - SWITZER CANYON TRAIL
EROSION CONTROL PLAN
FUTS STA 10+00 TO 24+00
COF PROJECT NO. 03-16013 & ST3023 | PZ-23-00058

JOB NO: 16COF03/22COF03 | BY: CAJ/DCW
DATE: MARCH 2025 | CHECKED: TES

C6.1



CONSTRUCTION NOTES

NOTE 972 1 EA
Stabilized construction entrance/exit gravel pad per Detail ES11, sheet C6.0. Coordinate construction entrance location with COF Project Manager.

NOTE 974 1,465 LF
Place straw wattles per Detail ES3, sheet C6.1.

NOTE 975 10 LF
Construct silt fence per Detail ES7, sheet C6.0.

NOTE 980 1 EA
Contractor to coordinate with COF Project Manager for location of designated concrete washout. Concrete washout shall be contained and properly disposed of upon completion of construction.

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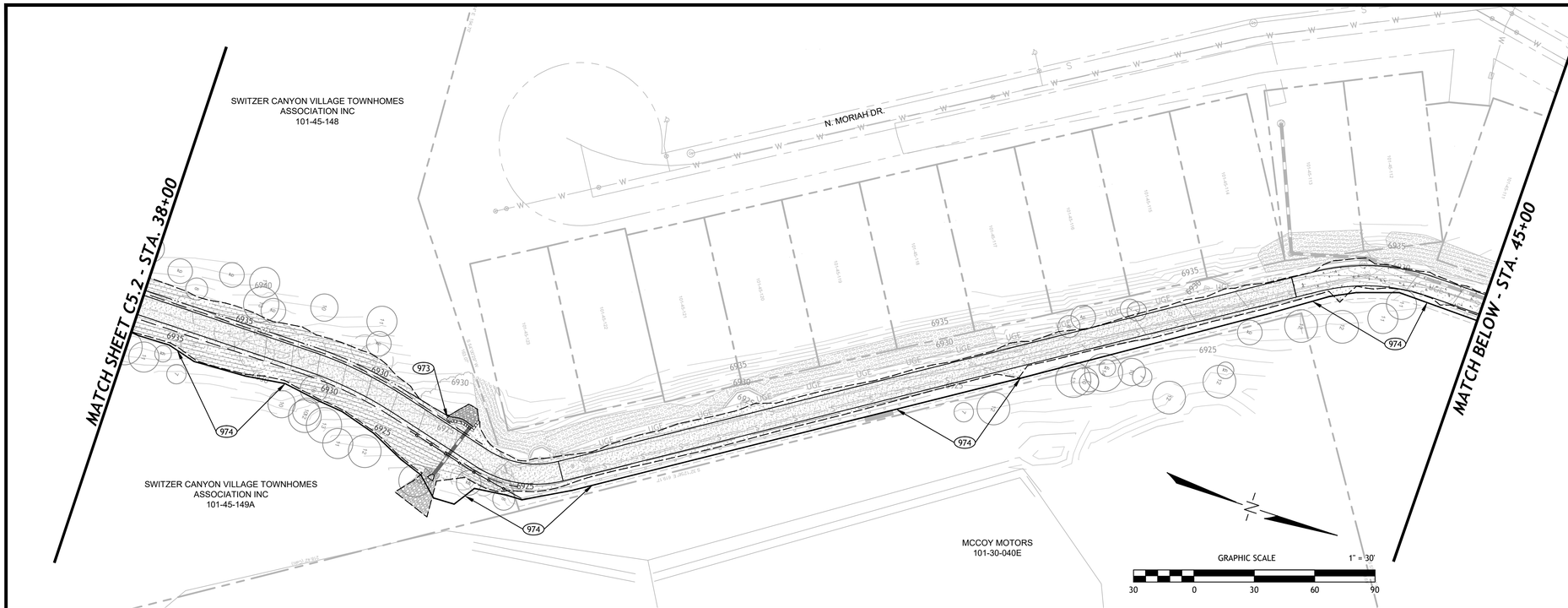
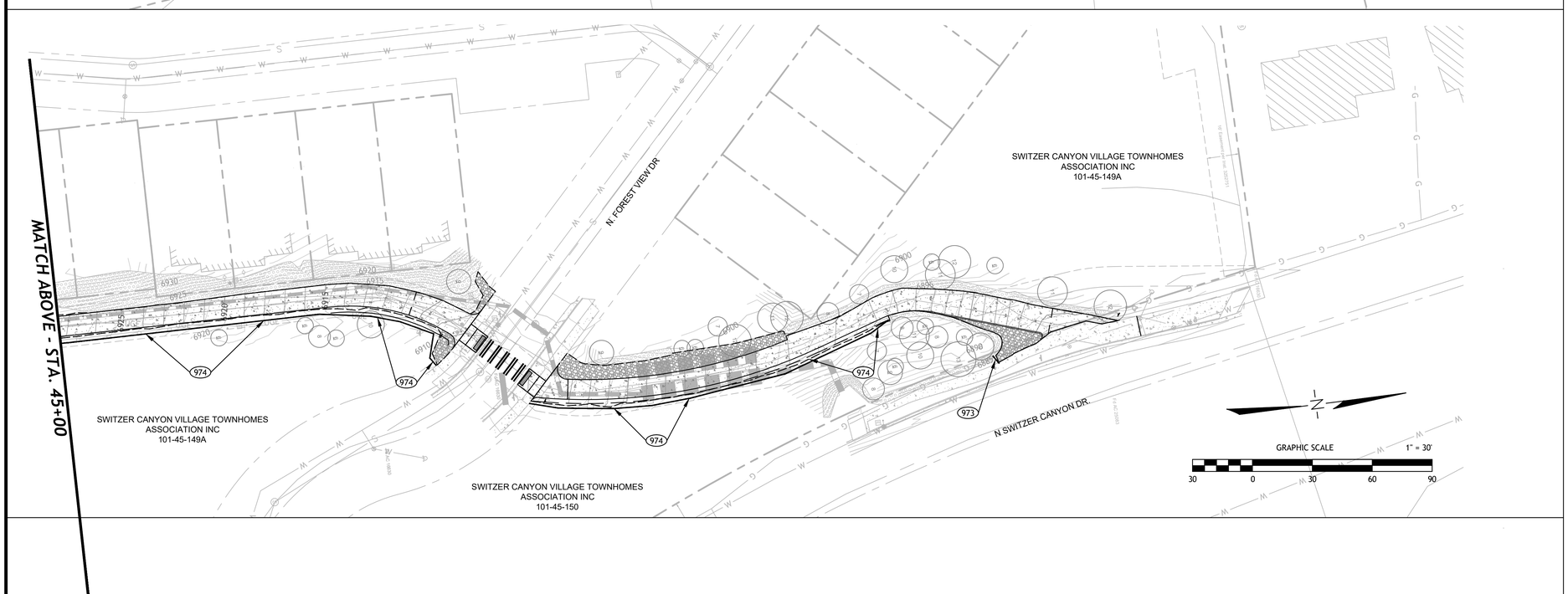
CITY OF FLAGSTAFF
FUTS - SWITZER CANYON TRAIL
EROSION CONTROL PLAN
FUTS STA 24+00 TO 38+00
COF PROJECT NO. 03-16013 & ST3023 | PZ-23-00058

JOB NO: 16COF03/22COF03 | BY: CAL/DCW
DATE: MARCH 2025 | CHECKED: TES

C6.2

FINAL PLANS





CONSTRUCTION NOTES

NOTE 972 1 EA
Construct stabilized construction entrance/exit gravel pad per Detail ES11, sheet C6.0. Coordinate construction entrance location with COF Project Manager.

NOTE 973 10 LF
Place sediment log per Detail ES1, sheet C6.0.

NOTE 974 1,105 LF
Place straw wattles per Detail ES3, sheet C6.1.

NOTE 980 1 EA
Contractor to coordinate with COF Project Manager for location of designated concrete washout. Concrete washout shall be contained and properly disposed of upon completion of construction.

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CERTIFICATE NO. 42777
THOMAS E. SMITH
Date Signed 3/14/25
Arizona U.S.A.

CITY OF FLAGSTAFF
FUTS - SWITZER CANYON TRAIL
EROSION CONTROL PLAN
FUTS STA 38+00 TO 50+23.63
COF PROJECT NO. 03-16013 & ST3023 | PZ-23-00058

C6.3

JOB NO: 16COF03/22COF03 | BY: CAL/DCW
DATE: MARCH 2025 | CHECKED: TES

FINAL PLANS