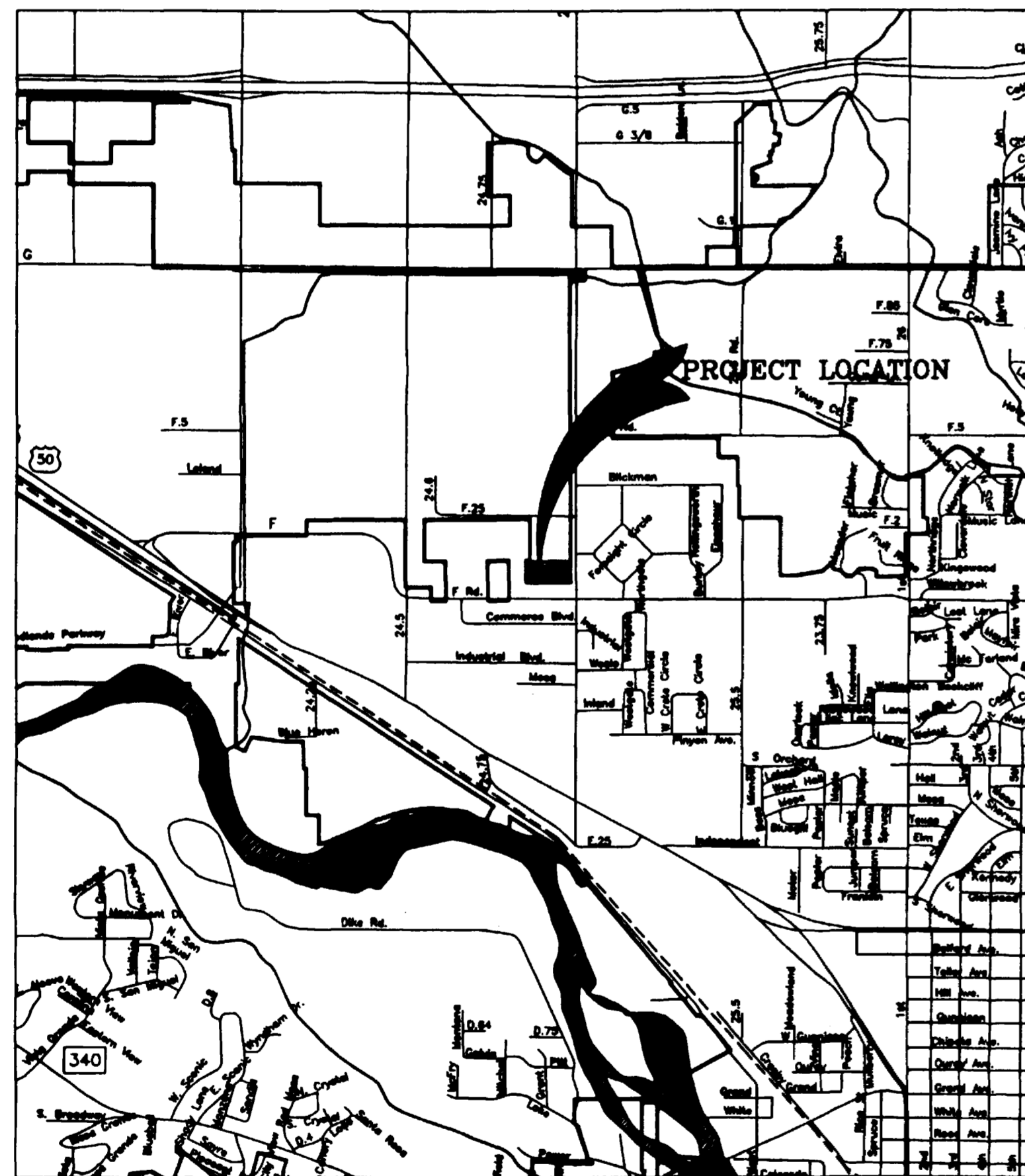


PLANS FOR
CONSTRUCTION OF

BENSLEY - BRISTOL MINOR SUBDIVISION

JANUARY 23, 1998



VICINITY MAP

NO.

TITLE

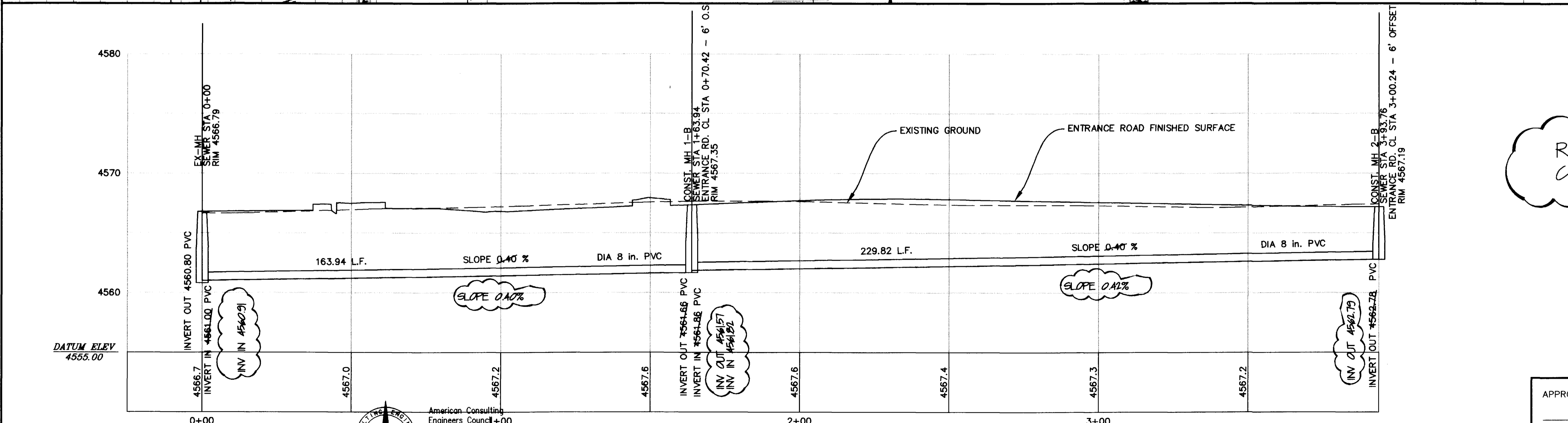
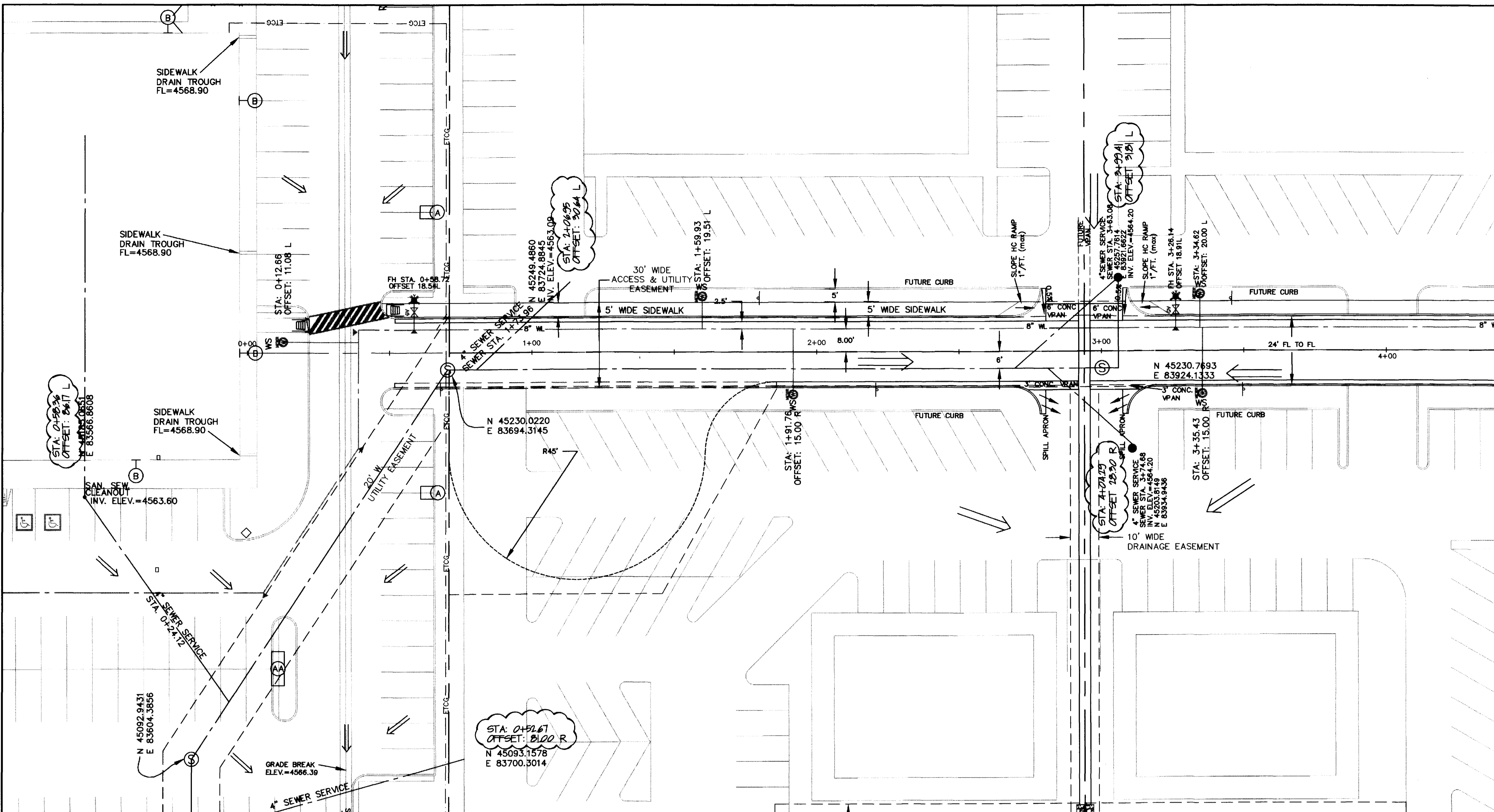
SHEET 1 OF 11	COVER SHEET
SHEET 2 OF 11	GENERAL LEGEND AND CONSTRUCTION NOTES
SHEET 3 OF 11	COMPOSITE PLAN
SHEET 4 OF 11	ENTRANCE ROAD AND GRADING & DRAINAGE PLAN
SHEET 5 OF 11	25 ROAD PLAN & PROFILE AND X-SECTIONS
SHEET 6 OF 11	SEWER LINE PLAN & PROFILE
SHEET 7 OF 11	25 ROAD STRIPING PLAN
SHEET 8 OF 11	STANDARD CONCRETE DETAILS
SHEET 9 OF 11	STANDARD STORM DRAIN DETAILS
SHEET 10 OF 11	STANDARD WATER LINE DETAILS
SHEET 11 OF 11	STANDARD SANITARY SEWER DETAILS

*Revised to As-built
based on field data 12/20/98*

THOMPSON-LANGFORD CORP.
529 25 1/2 RD., SUITE B210
GRAND JUNCTION, COLORADO
PH. (970) 243-6067

JOB NO. 0346-001

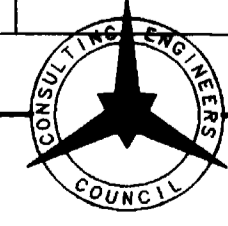
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APPROVED FOR CONSTRUCTION City of Grand Junction Engineering _____ Date: _____	FINAL ACCEPTANCE City of Grand Junction Engineering _____ Date: _____



REVISED TO AS-BUILT
CONDITIONS 6/24/98



DRAWN BY: CRK
 CHECKED BY: JEL
 PREPARED UNDER THE SUPERVISION OF: JAMES E. LANGFORD, P.E. NO. 14847
 REVIEWED: _____
 DATE: _____

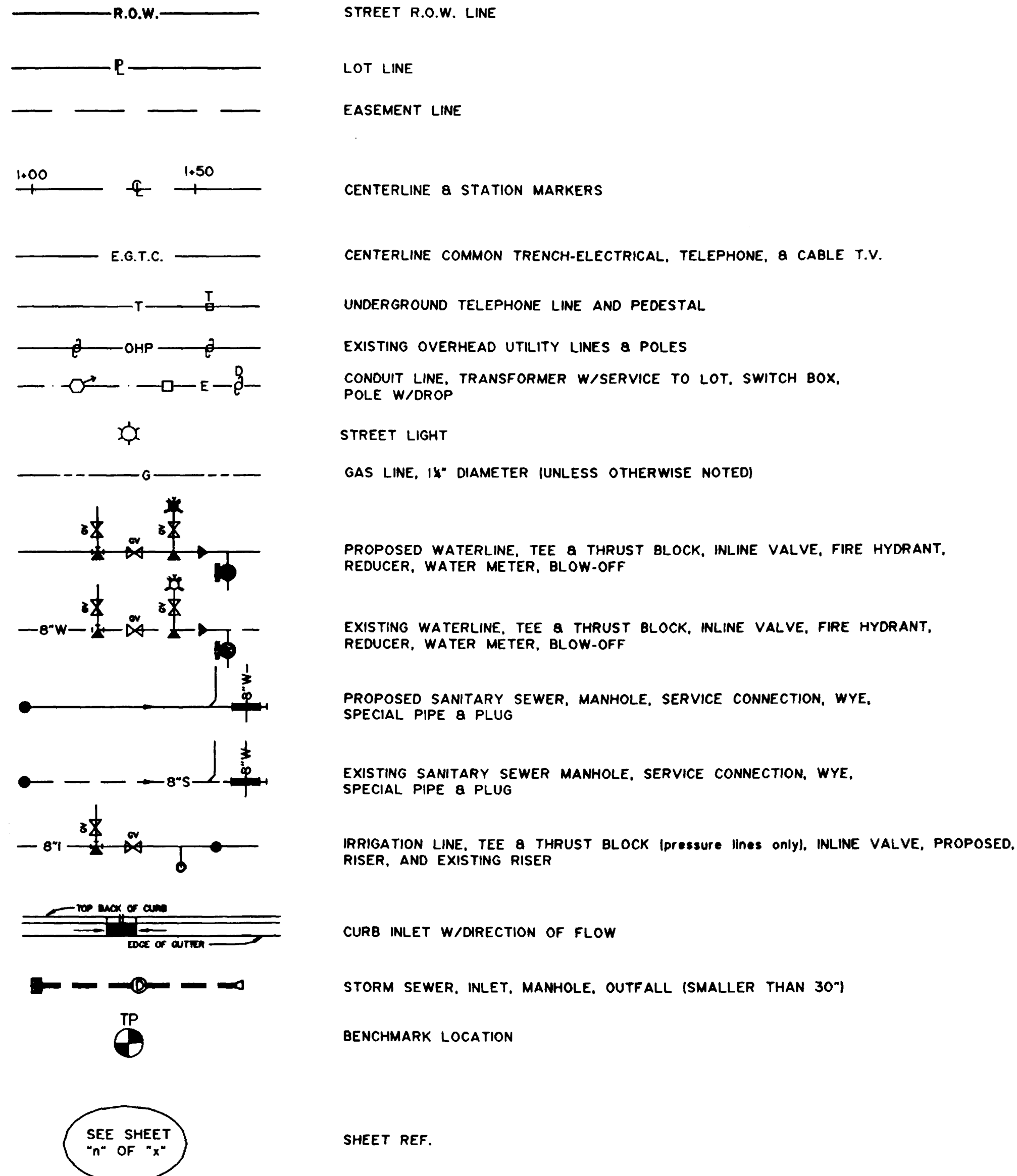


THOMPSON-LANGFORD CORP.
 529 25 1/2 RD., SUITE B210
 GRAND JUNCTION, COLORADO
 PH. (970) 243-6067

REVISION	DATE	DESCRIPTION	BY	CHK'D
1	3/2/98	REVISIONS PER CITY REVIEW COMMENTS (2/5/98)	CRK	DAT
2	6/24/98	REVISED TO AS BUILT CONDITIONS	CRK	DAT

APPROVED FOR CONSTRUCTION		FINAL ACCEPTANCE	
CITY OF GRAND JUNCTION	DATE	CITY OF GRAND JUNCTION	DATE
SUN KING MANAGEMENT CORP., P.O. BOX 3299, GRAND JUNCTION, COLORADO		970-245-9173	
BENSLEY-BRISTOL MINOR SUBDIVISION SEWER PLAN & PROFILE		SCALE: Horiz: 1"=20' Vert: 1"=5'	Project No: 0346-001
C:\DCA\p\0346-001\KIDZPLEX\VIEW\B-BSEWER-PL-PRO		DATE: 3/2/98	SHEET NO: 6 OF 11

LEGEND



GENERAL CONSTRUCTION NOTES

- Alignment, centerline curve data, and stationing to be verified from approved subdivision plat before construction.
- Locations of existing utilities shown on these plans are approximate only. Contractor is to contact affected utility for specific locations before digging.
- All satisfactory excess excavation from either utility or street construction shall be spread uniformly across the lots as directed by the Owner or his designated representative. All unsatisfactory or waste material including vegetation, roots, concrete, rocks, or other debris, shall be hauled from the project by the Contractor. No separate pay.
- Contractor shall give 48 hour notice to all authorized inspectors, superintendents, or person in charge of public and private utilities affected by his operations prior to commencement of work. Contractor shall assure himself that all construction permits have been obtained prior to commencement of work. All permits obtainable by the Contractor shall be obtained at the Contractor's expense.
- Contractor shall confine his construction operations to the rights-of-way, easements, and lots, as shown on Plans and Plat. Any damage to private facilities outside these limits shall be repaired by the Contractor at no expense to the Owner.
- All road construction, and related work, all materials, performance and quality of work, shall conform to the requirements of City of Grand Junction Standard Specifications and the applicable sections of the most current edition of the Division of Highways, State of Colorado Standard Specifications for Road and Bridge Construction, Colorado Standard Plans, Division of Highways M & S Standards.
- All utility installations are to be performed in accordance with the technical specifications of the City of Grand Junction. All water and sewer lines must be tested and approved prior to street construction. All water lines to be constructed in accordance with the technical specifications of the Ute Water District. All sewer lines to be constructed in accordance with the technical specifications of the City of Grand Junction.
- Contractor shall familiarize himself with the geotechnical testing requirements of City of Grand Junction. The results of the required types of tests and numbers of passing tests shall be furnished to the Engineer for verification before final acceptance by the Owner will be granted. All failing tests shall be brought to the immediate attention of the Engineer and retests shall be performed until passing results are obtained. All utility lines, including service lines falling within Public rights-of-way or Public easements shall be tested.
- Only materials on which a proctor test can be performed and accurate nuclear density tests can be run are approved for utility trench backfill unless otherwise approved by the Engineer.

SANITARY SEWER CONSTRUCTION NOTES

- All sewerline construction shall conform to the City of Grand Junction Sanitation Districts standards and specifications.
- All materials and workmanship shall comply to the standards and specifications of the City of Grand Junction Sanitation District. The City of Grand Junction reserves the right to accept or reject any materials and or workmanship that does not conform to it's standards and specifications.
- The Contractor shall have one signed copy of the Plans and a copy of the City of Grand Junction Standards and Specifications at the job site at all times.
- All sanitary sewer pipe shall be PVC SDR-35 (ASTM 3034) unless otherwise specified. All pipe joints shall be 13 foot joints unless otherwise approved by the District Engineer.
- All sewer mains to be laid to grade utilizing a "pipe laser".
- All service line connections to the new main shall be accomplished with full body wyes or tees. Tapping saddles will not be allowed.
- All trenches shall be compacted to 95% as determined by AASHTO T-99. Contractor shall be required to perform all necessary compaction tests through a certified soils lab.
- A minimum of 10 ft. of separation shall be maintained at all times between the waterline and sewer line except at specified crossings.
- Sewer service stub-outs shall extend 14 feet beyond the property line or through front lot easements, whichever is greater, and shall be glue capped and marked with a 2"x4" post painted green. As-built surveying for vertical grade of stubout required PRIOR to backfill.
- No service line shall be connected directly into manholes.
- The Contractor is responsible for all required sewer line testing to be completed in accordance with the City of Grand Junction Standards and Specifications. Final testing to be accomplished only after all other infrastructure has been installed. This includes waterlines, gas lines, electric lines, etc. Testing will be performed after all compaction of street subgrade and prior to street paving. Final lamping will also be accomplished after paving is completed to insure the line is clean. These tests will be the basis for issuing initial Acceptance of the sewer line extension.
- Manholes shall be constructed as shown on the City of Grand Junction Standard Sanitary Sewer Detail Sheet.
- Water stop gaskets and clamp assemblies are to be furnished and installed at all connections to manholes. No separate pay.
- Metal grade rings are NOT to be used on top of manhole rings to adjust to finish pavement elevation. All adjustments to finish grade on new manholes shall be made using concrete grade rings and grout beneath the cast iron ring as shown on the standard details.
- All sanitary sewer services to be 4" PVC SDR 35 unless otherwise specified.
- Where sanitary sewers cross under waterline with less than 18 inches of vertical separation, and in all cases where the sanitary sewer crosses over the waterline at any depth, provide total Concrete Encasement of pipe for a length of 10 feet to either side of waterline. SEE "Standard Waterline Details". Include the cost waterline crossing (Total concrete pipe encasement, pipe, and approved backfill), in unit price bid per lineal foot of sanitary sewer in appropriate sizes.
- Only materials on which a proctor test can be performed and accurate nuclear density tests can be run are approved for sewerline trench backfill unless otherwise approved by the Engineer.
- Cleanouts are required at 100' intervals on all service lines greater than 100' in length.
- To inhibit the movement of groundwater through sewer bedding and haunching material, clay cutoff walls of native material are to be constructed approximately 10 feet upstream from each manhole as shown on sanitary sewer plan and profiles. Cutoff walls are to be 3' thick and extend to the undisturbed trench walls, bottom of excavation and over the pipe to the limits of the bedding and haunching material as shown in the "Typical Trench Detail" sheet.
- Notify the City of Grand Junction 48 hours prior to the construction of the sanitary sewer facilities.
- The Contractor shall obtain City of Grand Junction Cut permit for all work within existing City Right-of-Way prior to construction.
- Redline as-builts shall be submitted to the City Utility Engineer PRIOR to paving for review.

PAVING CONSTRUCTION NOTES

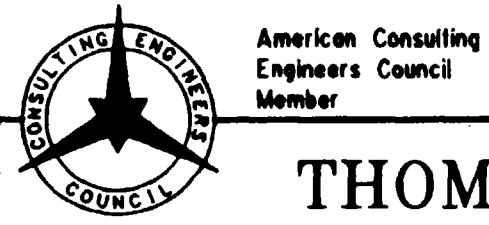
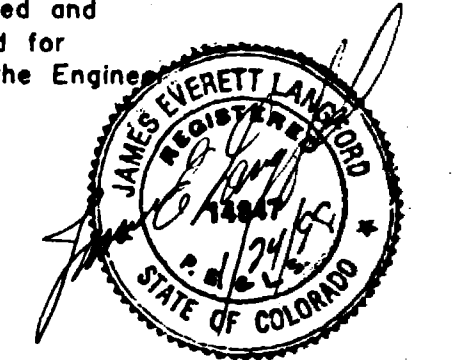
- All road widths, and radii are to face of curb or flowline unless noted otherwise. Any "spot" design elevations are to flowline of curb and gutter unless otherwise noted.
- TOC = top of curb elevation
BOW = back of sidewalk
EOP = edge of pavement elevation
RIM = rim of manhole
INV = invert elev. of manhole or inlet
CL = centerline
PL = property line
FL = flowline
EI = elevation
- The top 6" of existing ground or the top 6" of areas cut to final grade are to be scarified, moistened and recompacted to 95% of AASHTO T99 to a depth of 6" before starting up with embankments or before base is placed.
- Contractor to protect existing utilities and appurtenances. Manholes, drainage inlets, utility lines, etc., damaged, covered or filled with dirt or debris by the Contractor shall be cleaned and repaired at no expense to the Owner.
- Aggregate base course must be compacted 95% AASHTO T-180.
- Hot-mix asphaltic concrete to be CDOT Grading C. A mix design for the proposed pit must be approved by Engineer prior to placement of pavement.
- Where proposed pavement is to match existing pavement, existing pavement is to be square cut, full base thickness is to be brought to match line and existing surface is to be tack-coated before proposed surface is placed.
- Handicap ramps are to be constructed where indicated on the plans and in accordance with current City of Grand Junction Standard Details.
- Curb, gutter and drainage pans are to have expansion joints at each change in horizontal alignment of curb and gutter, but in no case at a greater distance apart than 100 feet. Locate dummy grooved joints between expansion joints at intervals not exceeding 10 feet.
- Include backing of curb and gutter and or sidewalk with native fill material per the typical roadway section in the unit price bid for embankment.

WATERLINE CONSTRUCTION

- All water line construction shall be in accordance with the Ute Water Districts standards and specifications
- Contractor shall notify the Ute Water District 24 hours prior to the beginning of construction.
- All trenches shall be compacted to 95% as determined by AASHTO T-99. Contractor shall be required to perform all necessary compaction tests through a certified soils lab.
- Maximum cover required over top of new waterlines is 4'-6".
- All water mains to be DR-18 PVC conforming to AWWA C-900
- All service connections to be 1" Type "K" copper between main line and meter pits.
- Cast iron fittings to conform to AWWA C-110.
- Fire Hydrants shall conform to AWWA C-502-85.
- All materials, labor and equipment required for testing and disinfection of waterlines shall be furnished by Contractor. Disinfection of waterlines shall conform to AWWA C-651-86 or latest revision thereof. No separate pay.
- All pipe bends/angle points, both horizontal and vertical, as called for on the plans are to be thrust blocked per Clifton Water District details and Technical Specifications.
- Only materials on which a proctor test can be performed and accurate nuclear density tests can be run are approved for waterline trench backfill unless otherwise approved by the Engineer.

NOTE:
All details, construction, inspections, and testing shall conform to City of Grand Junction Standard Specifications for Road and Bridge Construction. The contractor shall have a copy of the accepted plans and the current (adopted March 28, 1995) City of Grand Junction Standard Specifications for Road and Bridge Construction on-site and available at all times.

ACCEPTED FOR CONSTRUCTION FOR ONE YEAR FROM THIS DATE. Acceptance of these plans does not relieve the developer, contractor, or the engineer from conformance with City of Grand Junction Standard Specifications for Road and Bridge Construction.	ACCEPTED FOR CONSTRUCTION FOR ONE YEAR FROM THIS DATE. CITY OF GRAND JUNCTION	APPROVED FOR CONSTRUCTION UTE WATER DISTRICT
City of Grand Junction Engineering Division Representative _____ Date _____	_____ Date _____	<i>Edal Zh</i> 3/31/98 Date
ACCEPTED AS CONSTRUCTED CITY OF GRAND JUNCTION ENGINEERING	INITIAL ACCEPTANCE CITY OF GRAND JUNCTION	ACCEPTED AS CONSTRUCTED UTE WATER DISTRICT
City of Grand Junction Engineering Division Representative _____ Date _____	_____ Date _____	_____ Date _____



THOMPSON-LANGFORD CORP.
529 25 1/2 RD., SUITE B210
GRAND JUNCTION, COLORADO
PH. (970) 243-6067

REVISION	DATE	DESCRIPTION	BY	CHKD

SUN KING MANAGEMENT CORP., P.O. BOX 3299, GRAND JUNCTION, COLORADO 970-245-9173

SCALE: N.T.S. JOB NO: 0346-001 DATE: 1/26/98

GENERAL LEGEND AND CONSTRUCTION NOTES

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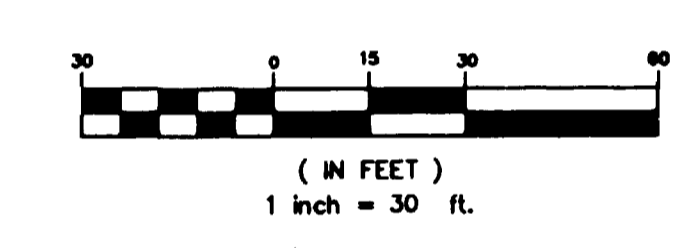
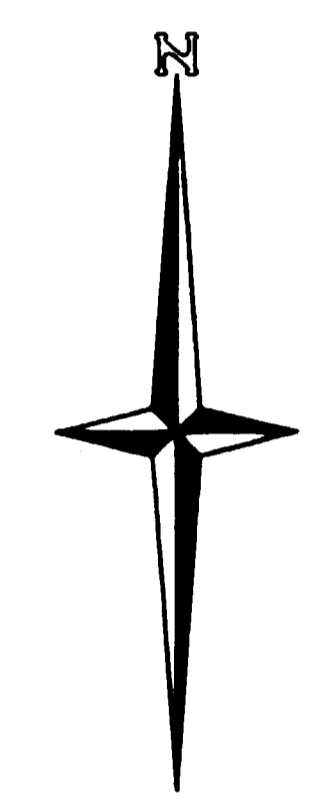
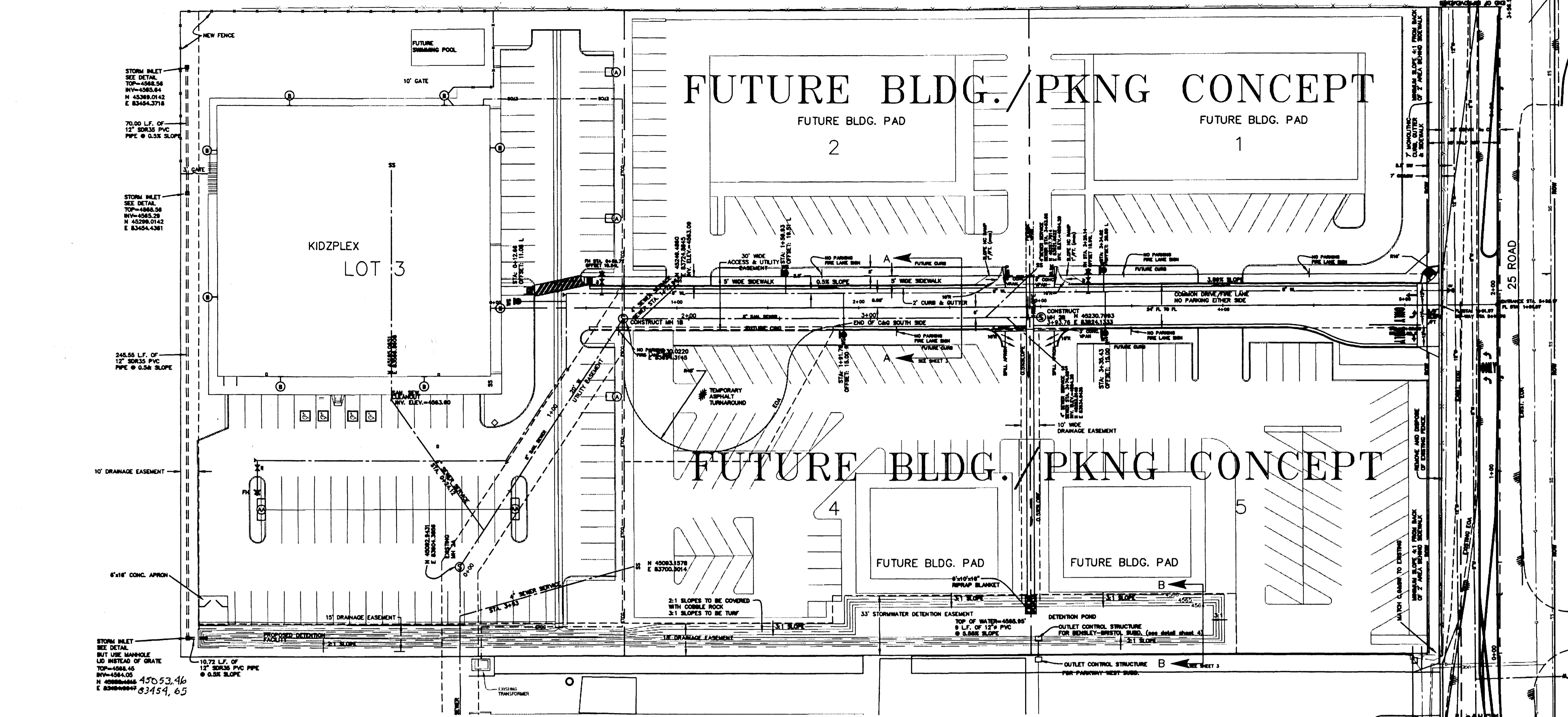
SHEET NO: 2 of 11

DRAWN BY: CRK
DESIGNED BY: JEL
CHECKED BY: JEL

REVIEWED _____ FOR _____
DATE: _____

REVIEWED _____
DATE: _____

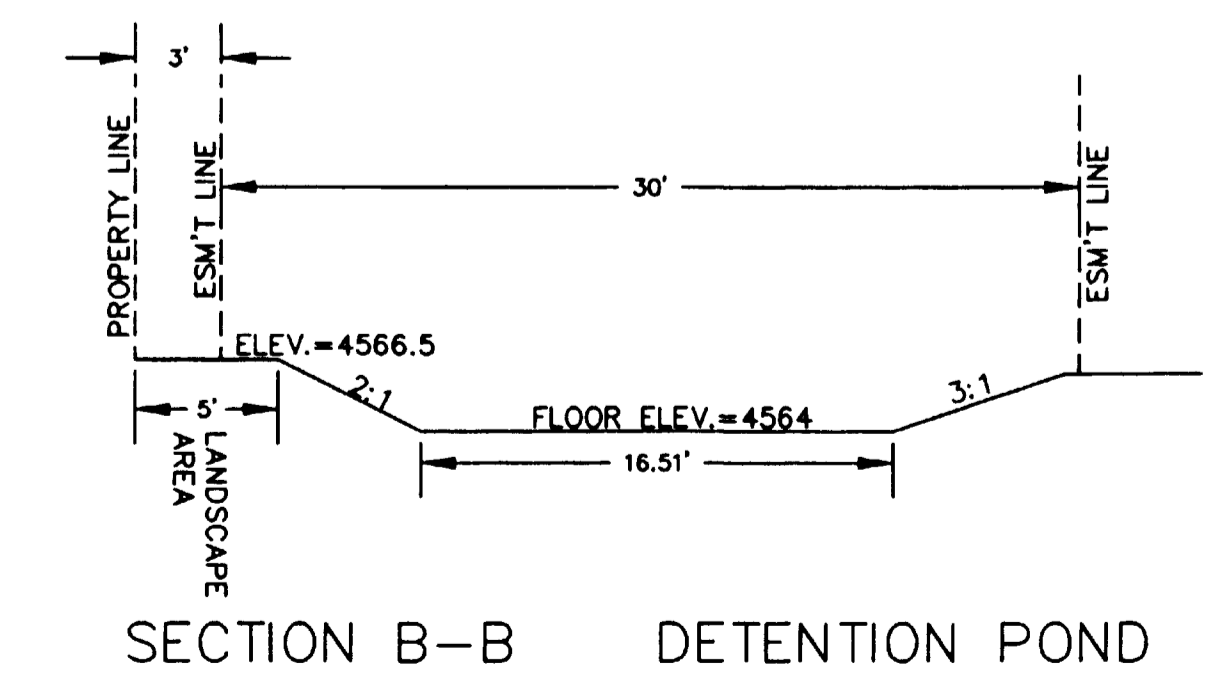
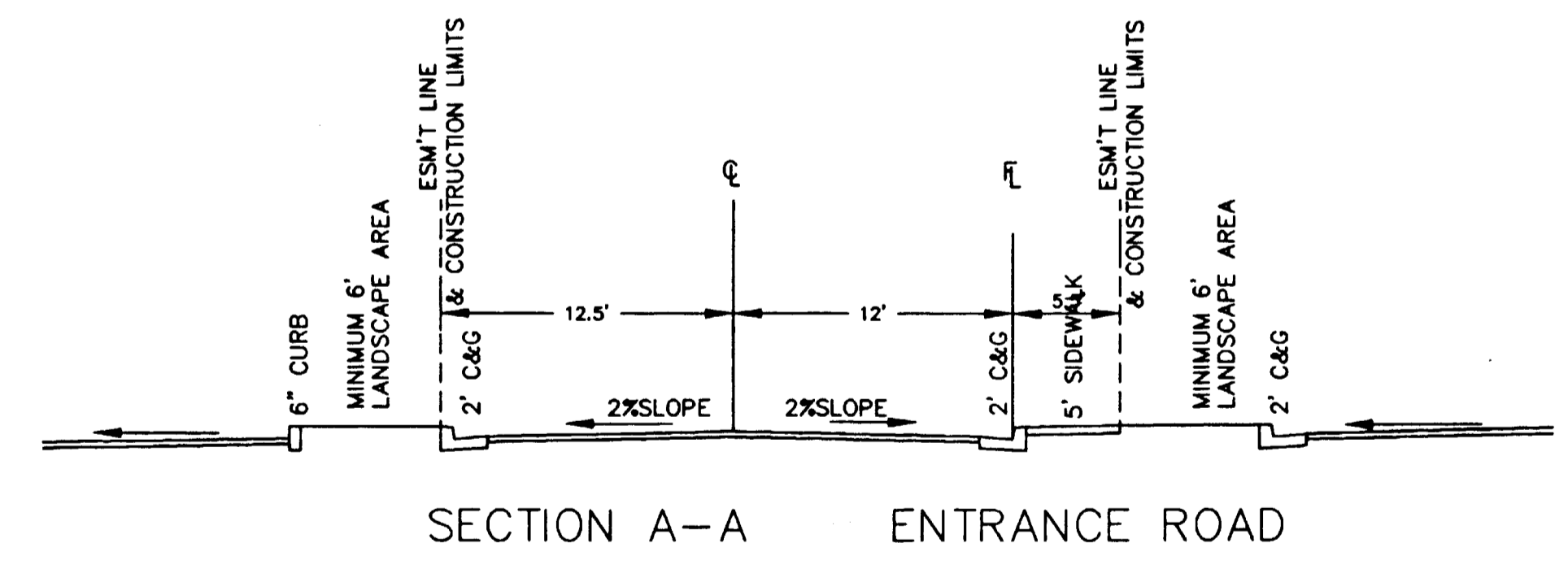
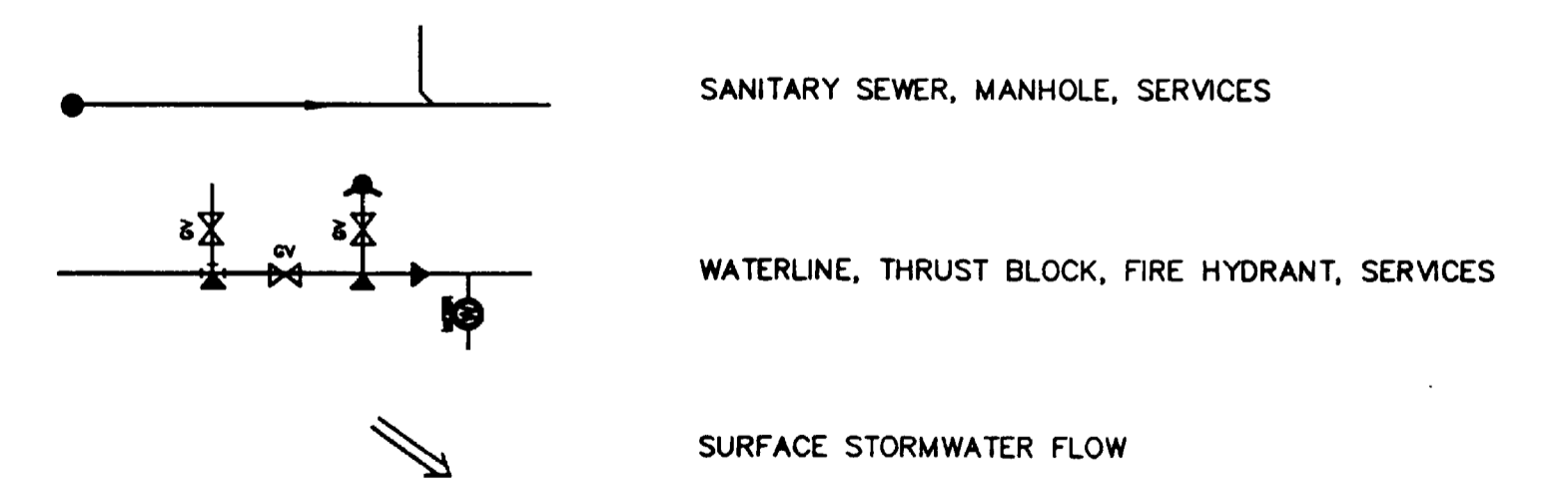
BENCHMARK
 MESA COUNTY MONUMENT IN CENTERLINE
 OF INTERSECTION OF PATTERSON ROAD AND 25 ROAD.
 ELEVATION = 4567.03'



LAND USE

LOTS (5)	5.608 AC.	94.5%
R.O.W.	0.329 AC.	5.5%
OPEN SPACE	0.000 AC.	0.0%
TOTAL	5.937 AC.	100.0%

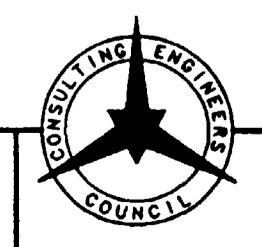
LEGEND



UTILITY COMPANIES

WATER	--- UTE WATER
ELECTRIC	--- PUBLIC SERVICE CO. OF COLORADO
GAS	--- PUBLIC SERVICE CO. OF COLORADO
SEWER	--- CITY OF GRAND JUNCTION
TELEPHONE	--- US WEST COMMUNICATIONS
CABLE	--- TCI

NOTE:
 THIS SITE IS NOT IMPACTED BY ANY IDENTIFIED 100 YEAR FLOOD PLAIN. SEE DRAINAGE REPORT FOR MORE INFORMATION.



THOMPSON-LANGFORD CORP.
 529 25 1/2 RD., SUITE B210
 GRAND JUNCTION, COLORADO
 PH. (970) 243-8067

REVISION	DATE	DESCRIPTION	BY	CHD
1	3/2/98	REVISIONS PER CITY REVIEW COMMENTS (2/5/98)	CRK	DAT

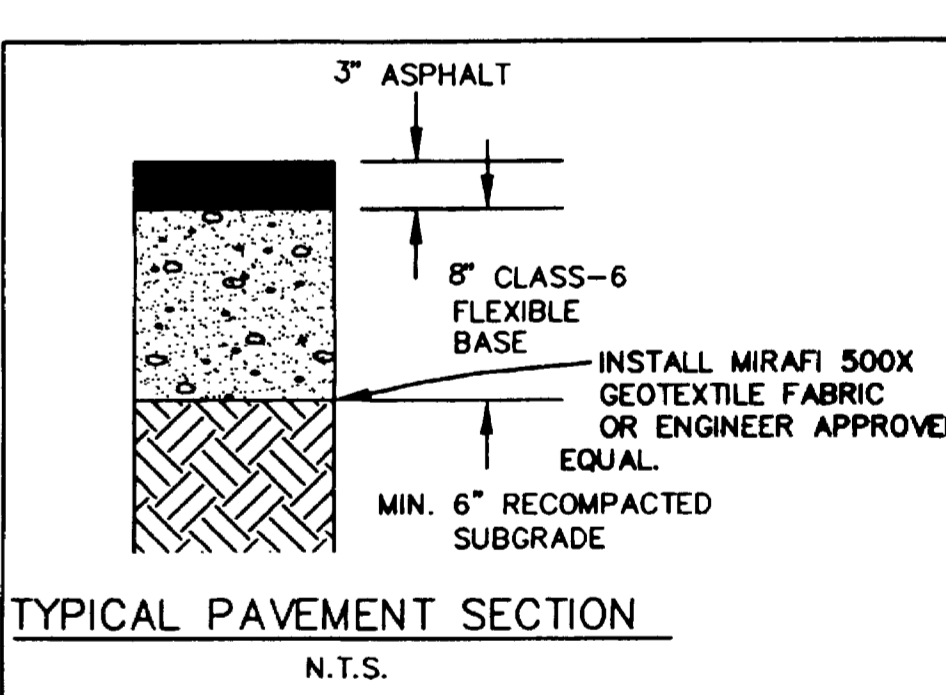
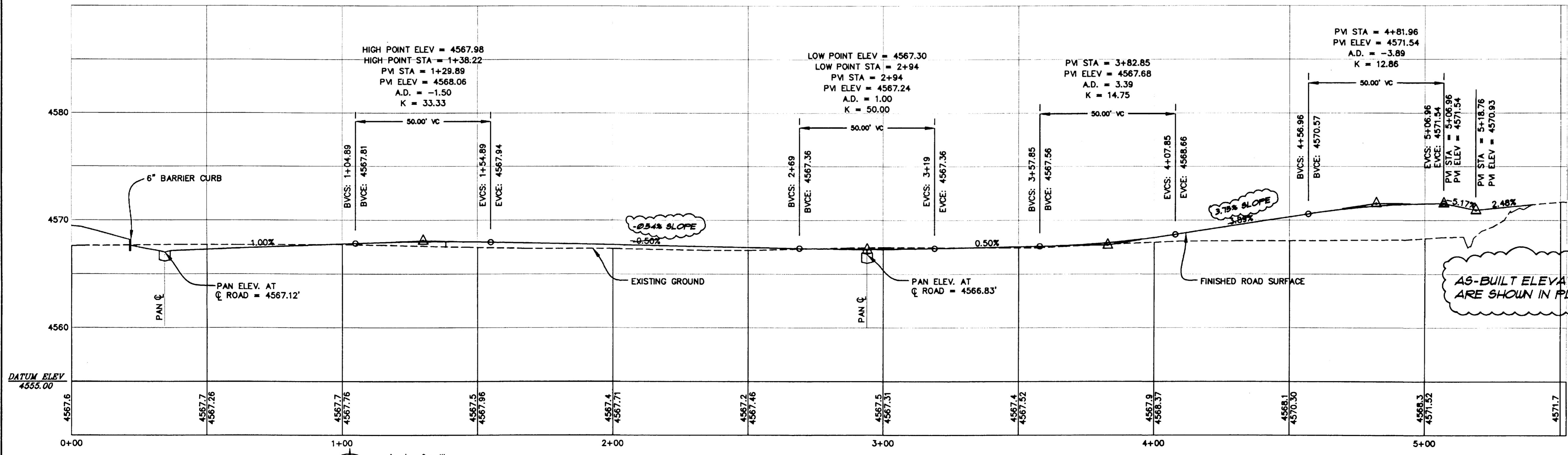
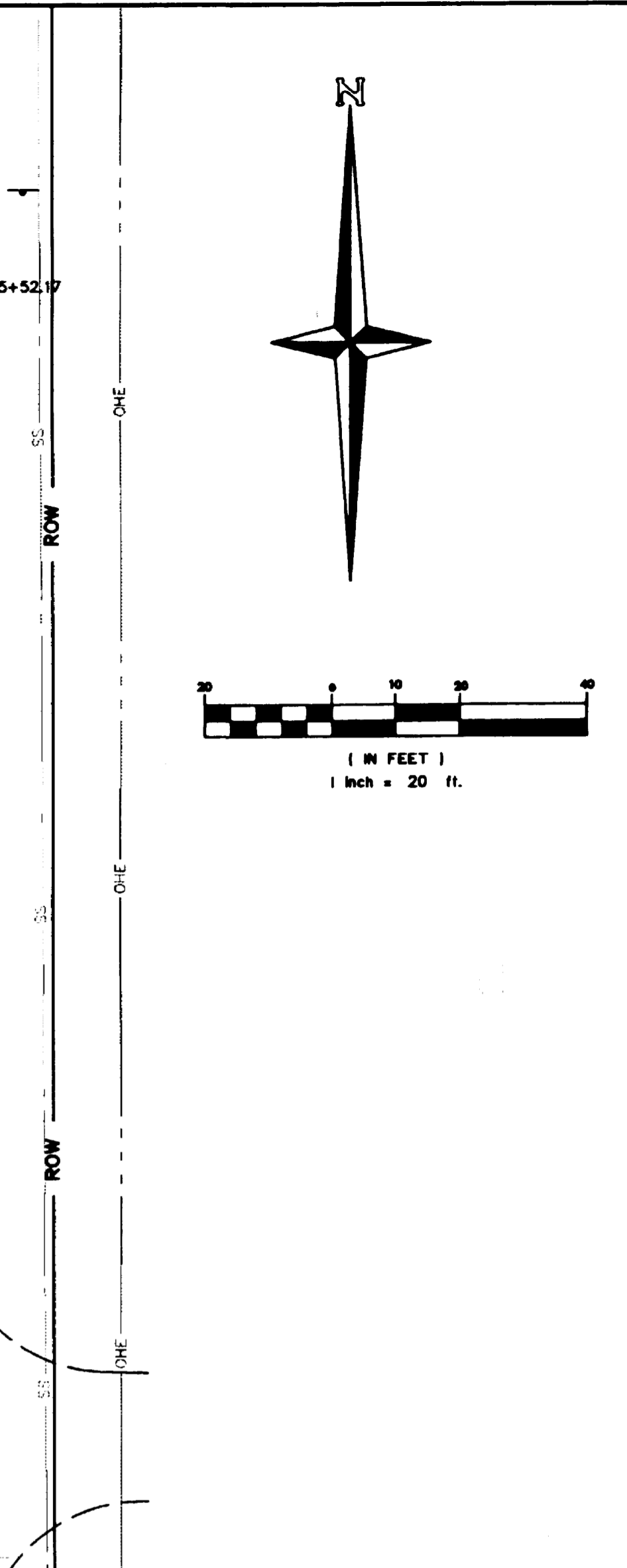
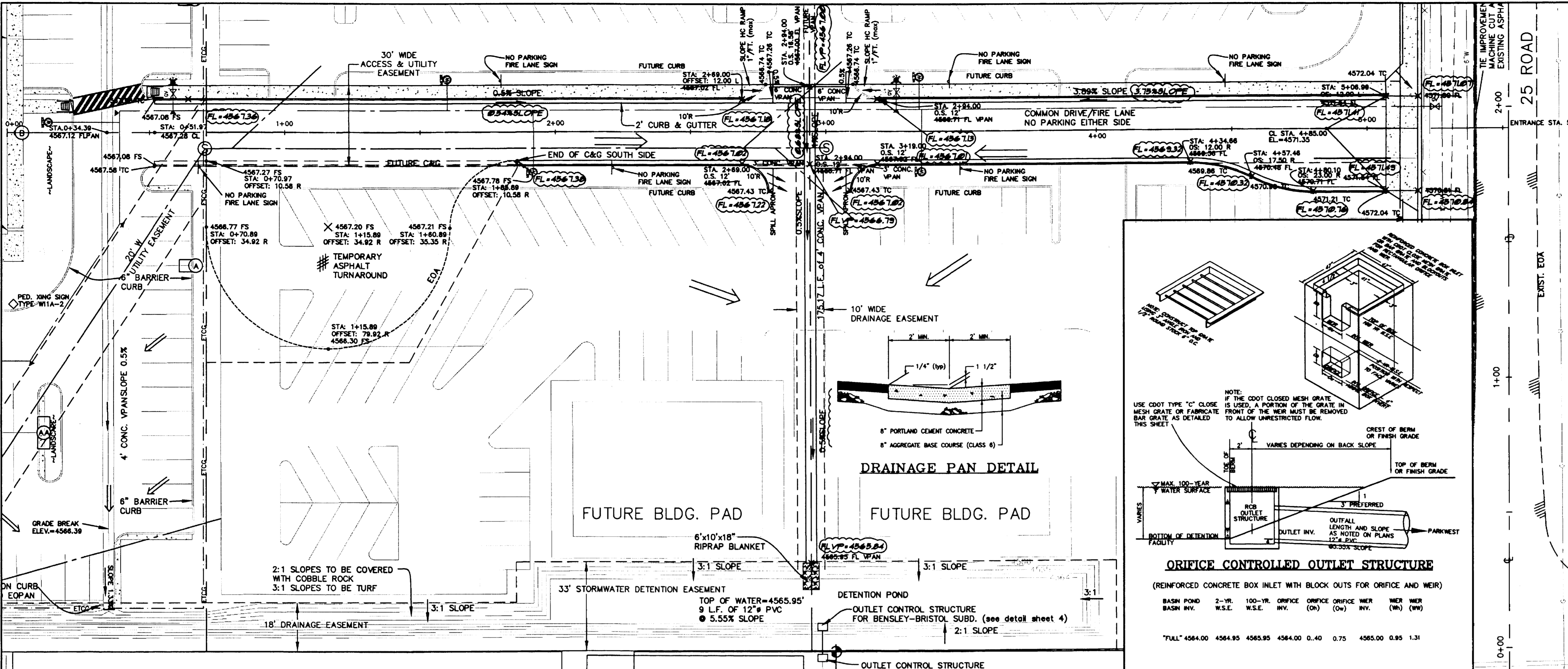
SUN KING MANAGEMENT CORP., P.O. BOX 3299, GRAND JUNCTION, COLORADO 970-245-9173

BENSLEY - BRISTOL MINOR SUBDIVISION COMPOSITE PLAN

APPROVED FOR CONSTRUCTION	<i>Walt Z...</i>	15-Apr-98
UTE WATER CONSERVANCY DISTRICT		DATE
FINAL ACCEPTANCE		
UTE WATER CONSERVANCY DISTRICT		DATE
APPROVED FOR CONSTRUCTION		
CITY OF GRAND JUNCTION		DATE
FINAL ACCEPTANCE		
CITY OF GRAND JUNCTION		DATE

DRAWN BY: CRK	PREPARED UNDER THE SUPERVISION OF: JAMES E. LANGFORD P.E. NO. 14847
DESIGNED BY: JAMES E. LANGFORD	REVIEWED: _____
CHECKED BY: JEL	DATE: _____

SCALE: 1" = 30'	JOB NO: 0346-001	DATE: 3/2/98
SHEET NO: 3 of 11		

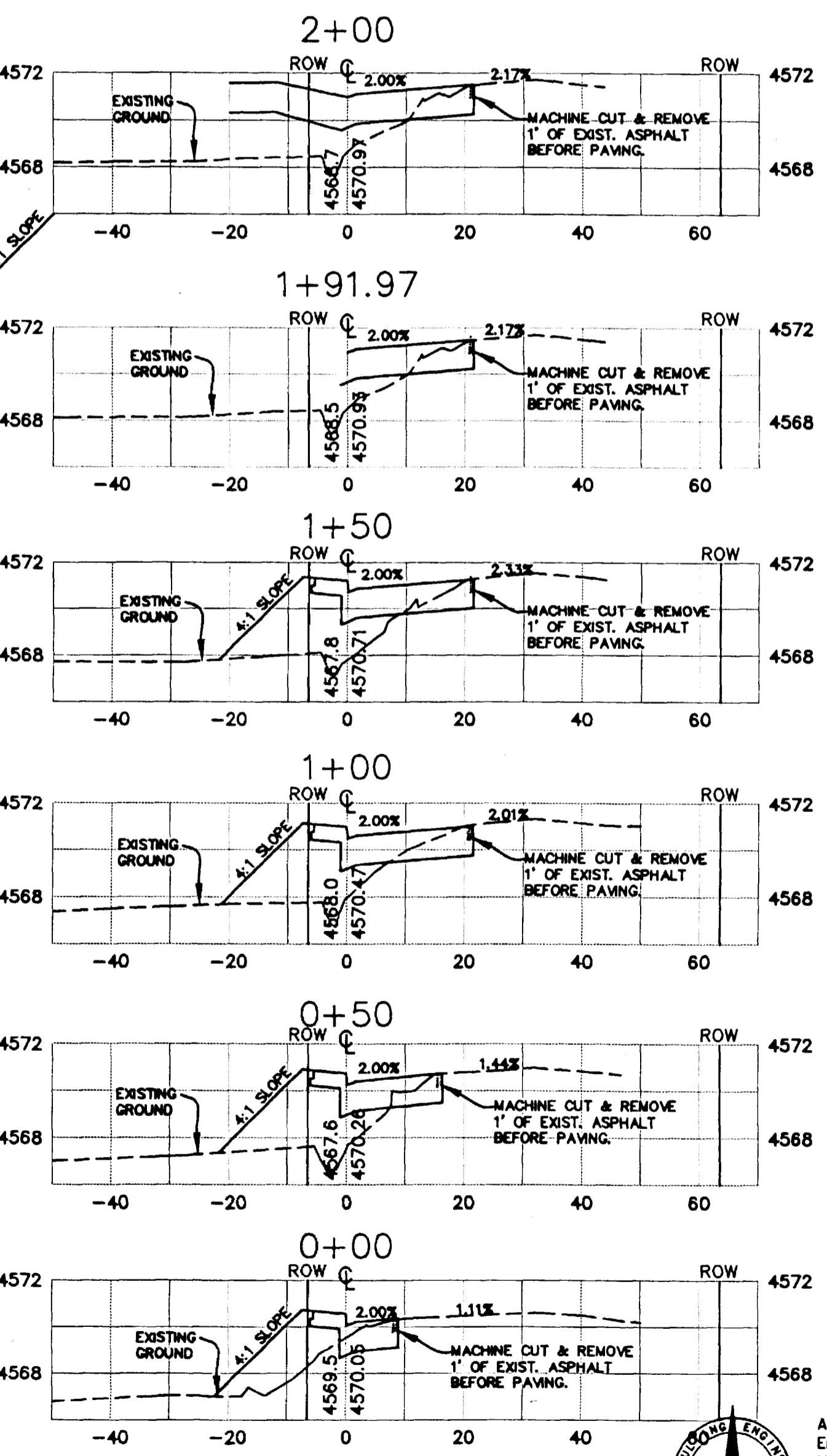
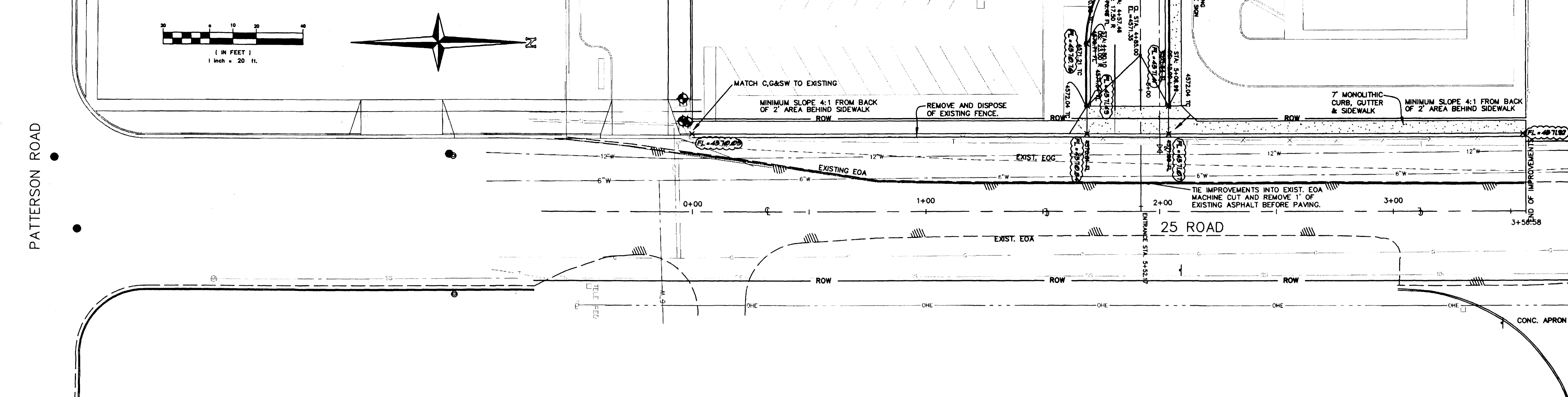


DRAWN BY: CRK PREPARED UNDER THE SUPERVISION OF JAMES E. LANGFORD P.E. NO. 14847	CHECKED BY: JEL REVIEWED: _____ DATE: _____
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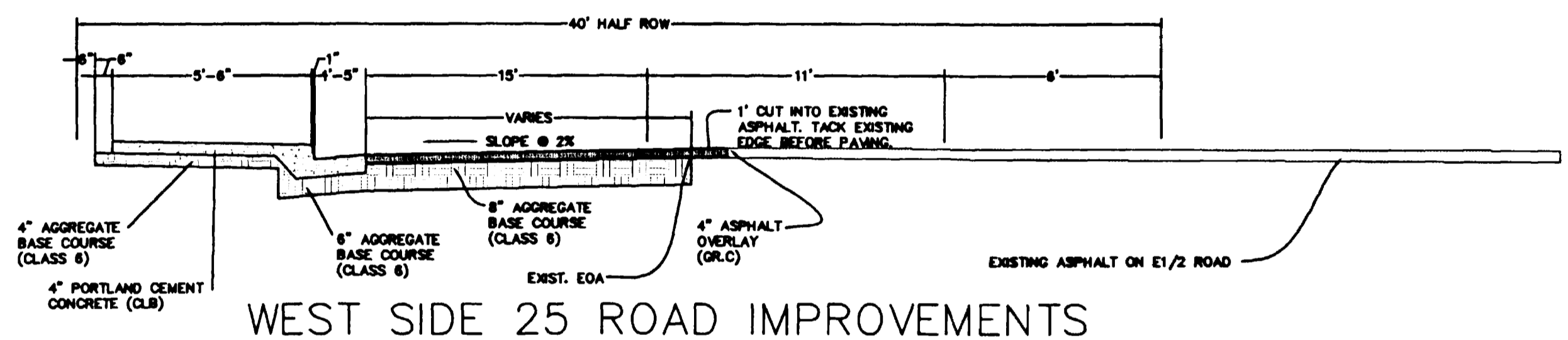
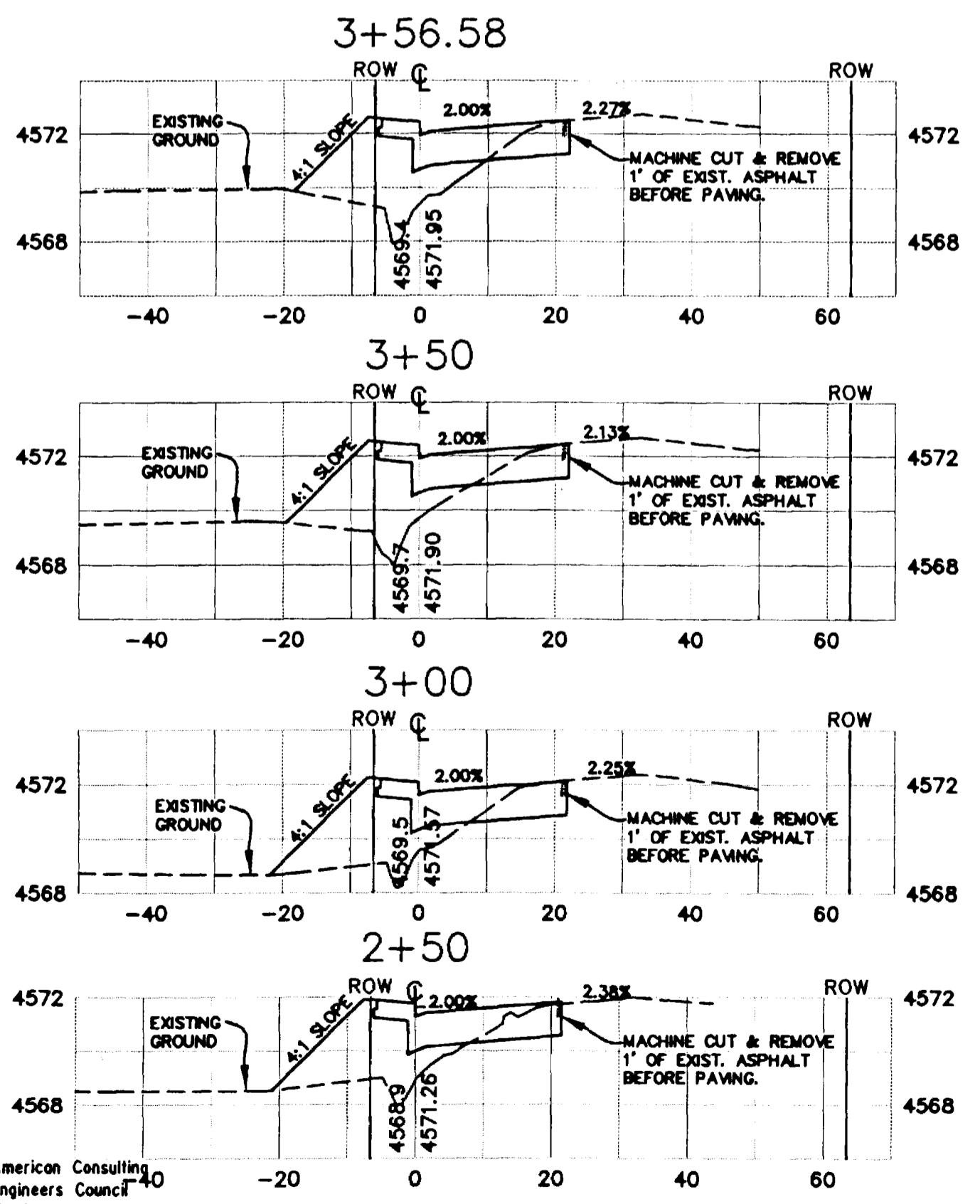
American Consulting Engineers Council Member
THOMPSON-LANGFORD CORP.
 529 25 1/2 RD., SUITE B210
 GRAND JUNCTION, COLORADO
 PH. (970) 243-8067

REVISION	DATE	DESCRIPTION	BY	CHKD
1	3/2/98	REVISIONS PER CITY REVIEW COMMENTS (2/5/98)	CRK	DAT
2	1/7/99	AS-BUILT FLOWLINE ELEVATIONS ADDED TO DRAWING	CRK	DAT

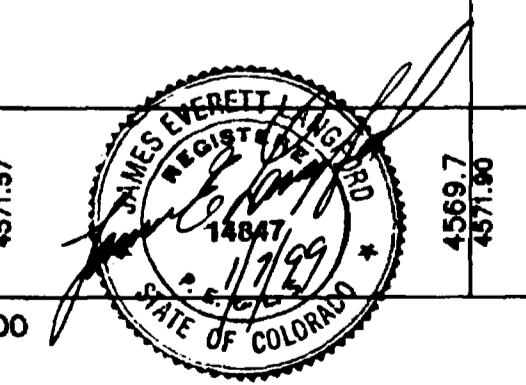
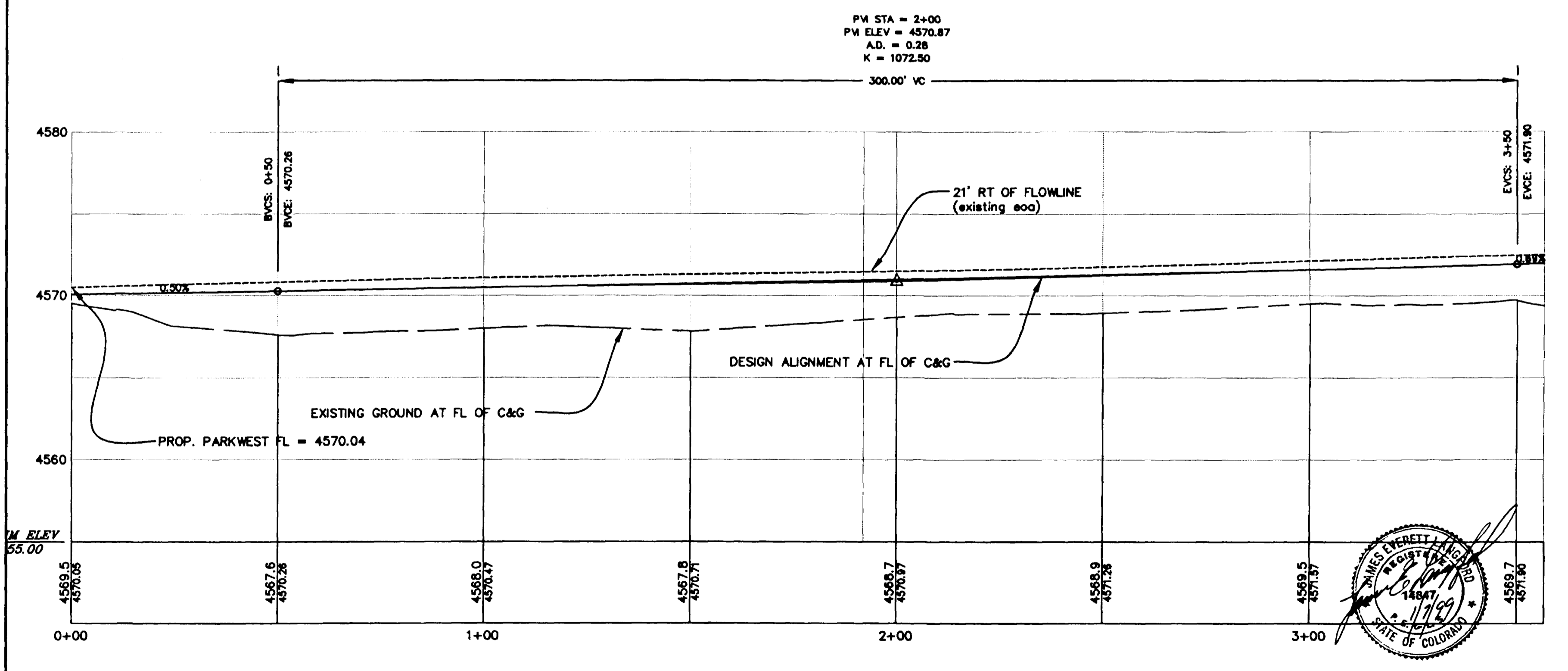
APPROVED FOR CONSTRUCTION CITY OF GRAND JUNCTION _____ DATE _____	APPROVED FOR CONSTRUCTION CITY OF GRAND JUNCTION _____ DATE _____
PROJECT NO: 0346-001	SHEET NO: 4 OF 11
DATE: 3/2/98	



AS-BUILT ELEVATIONS AS SURVEYED ON 12/28/98 ARE SHOWN IN PLAN VIEW ONLY



WEST SIDE 25 ROAD IMPROVEMENTS



APPROVED FOR CONSTRUCTION	FINAL ACCEPTANCE
CITY OF GRAND JUNCTION	CITY OF GRAND JUNCTION
DATE	DATE

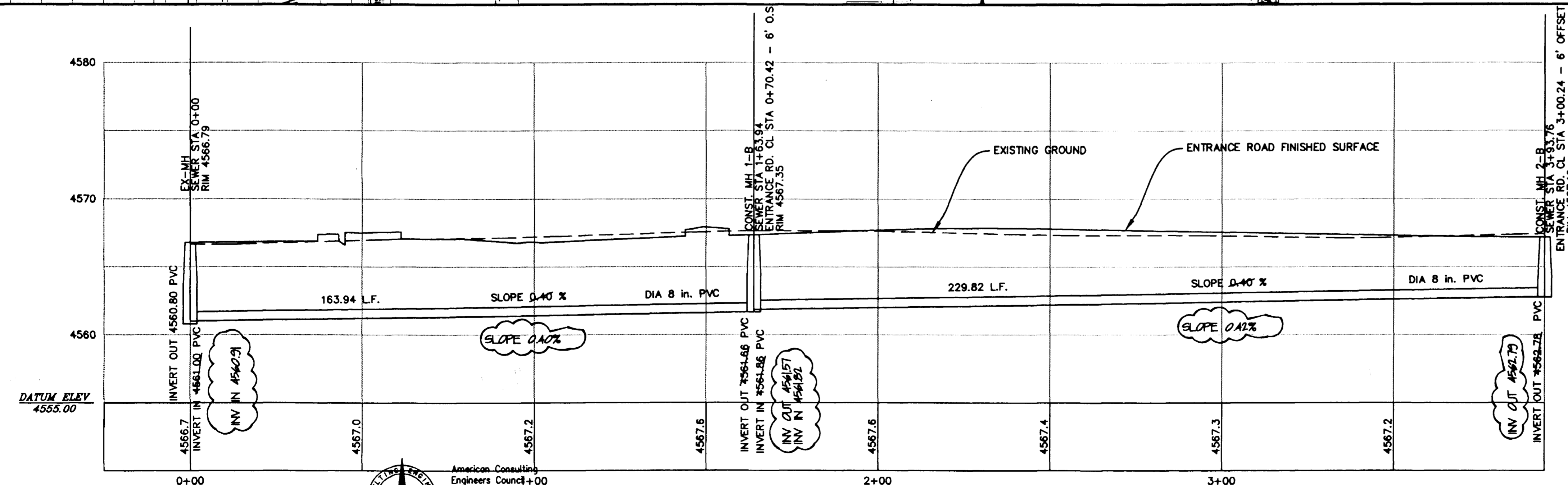
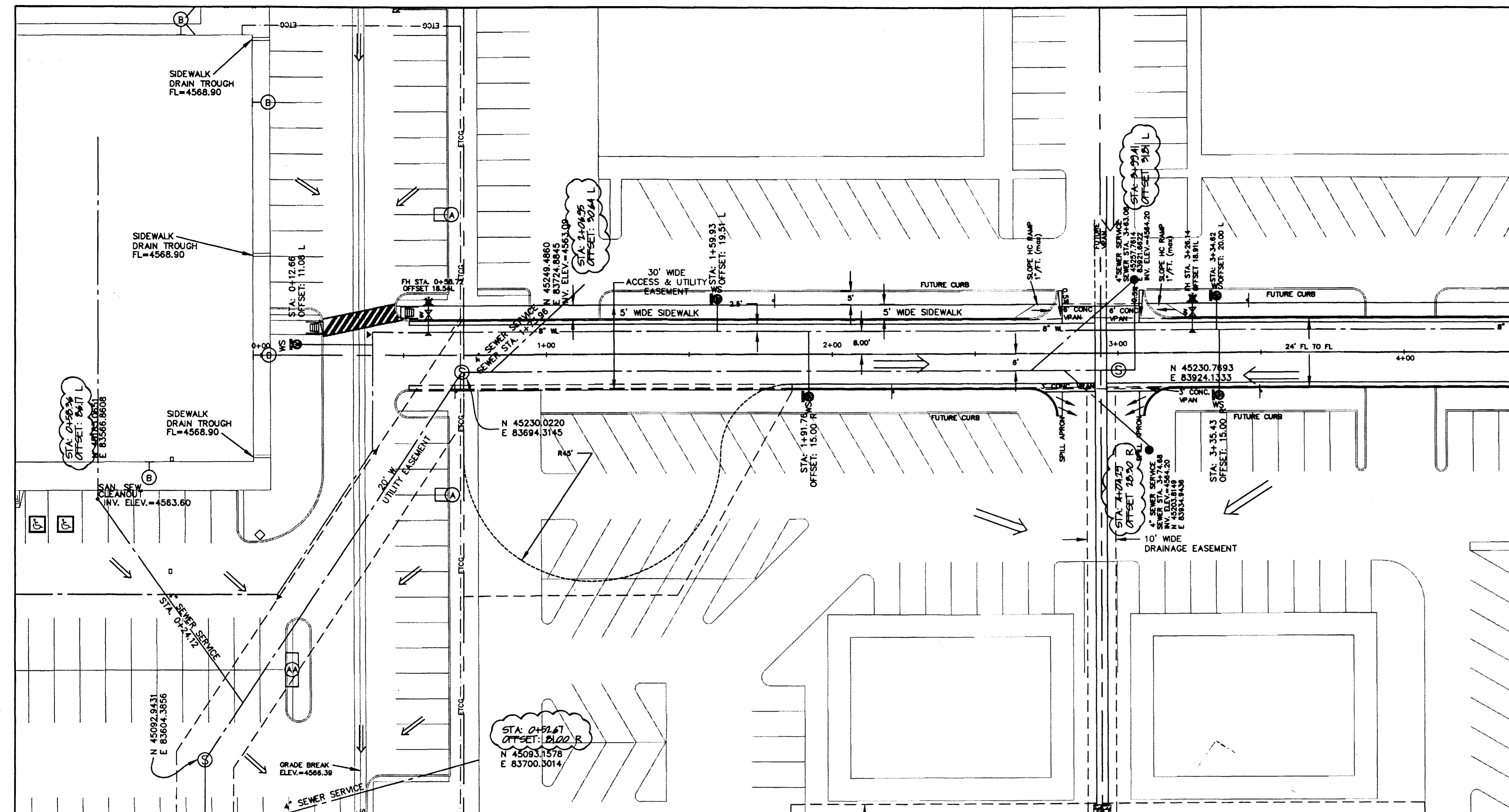
DRAWN BY: CRK
 CHECKED BY: JEL
 PREPARED UNDER THE SUPERVISION OF: JAMES E. LANGFORD, P.E. NO. 14847
 REVIEWED: _____
 DATE: _____



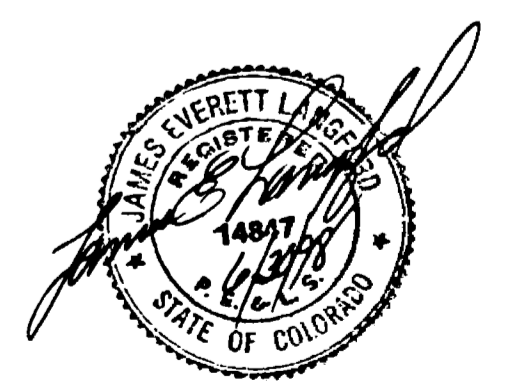
THOMPSON-LANGFORD CORP.
 529 25 1/2 RD., SUITE B210
 GRAND JUNCTION, COLORADO
 PH. (970) 243-6087

REVISION	DATE	DESCRIPTION	BY	CHK'D
1	3/2/98	REVISIONS PER CITY REVIEW COMMENTS (2/5/98)	CRK	DAT
2	1/7/99	AS-BUILT FLOWLINE ELEVATIONS ADDED TO DRAWING	CRK	DAT

SUNKING MANAGEMENT CORP., P.O. BOX 3299, GRAND JUNCTION, COLORADO 970-245-9173
 25 ROAD PLAN & PROFILE AND X-SECTIONS
 SCALE: Horiz: 1"=20', Vert: 1"=5'
 DATE: 3/2/98
 SHEET NO: 5 of 11
 Project No: 0346-001

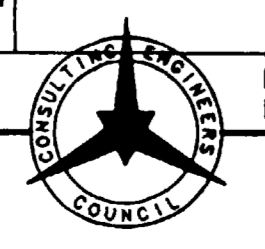


REVISED TO AS-BUILT
CONDITIONS 6/24/98



APPROVED FOR CONSTRUCTION	FINAL ACCEPTANCE
CITY OF GRAND JUNCTION	CITY OF GRAND JUNCTION
DATE	DATE

DRAWN BY: CRK
 PREPARED UNDER THE SUPERVISION OF
 JAMES E. LANGFORD P.E. NO. 14847
 CHECKED BY: JEL
 DATE:



THOMPSON-LANGFORD CORP.
 529 25 1/2 RD., SUITE B210
 GRAND JUNCTION, COLORADO
 PH. (970) 243-6067

REVISION	DATE	DESCRIPTION	BY	CHK'D
1	3/2/98	REVISIONS PER CITY REVIEW COMMENTS (2/5/98)	CRK	DAT
2	6/24/98	REVISED TO AS BUILT CONDITIONS	CRK	DAT

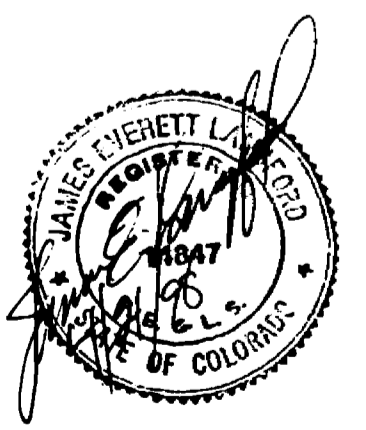
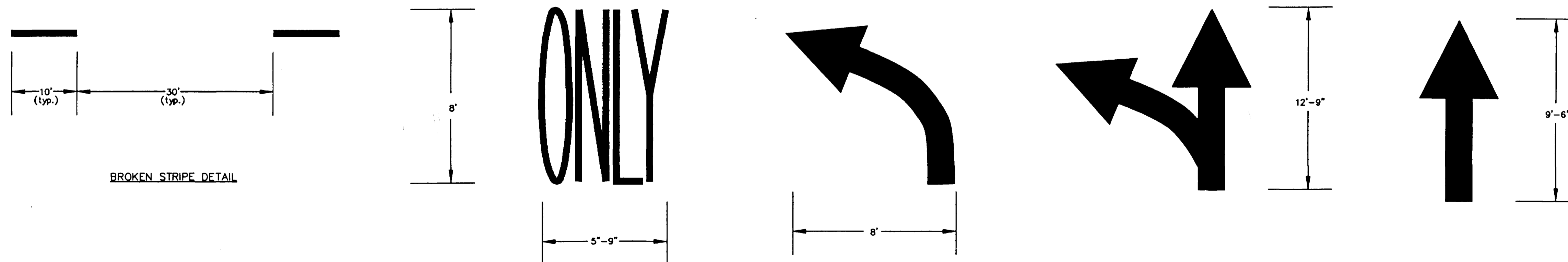
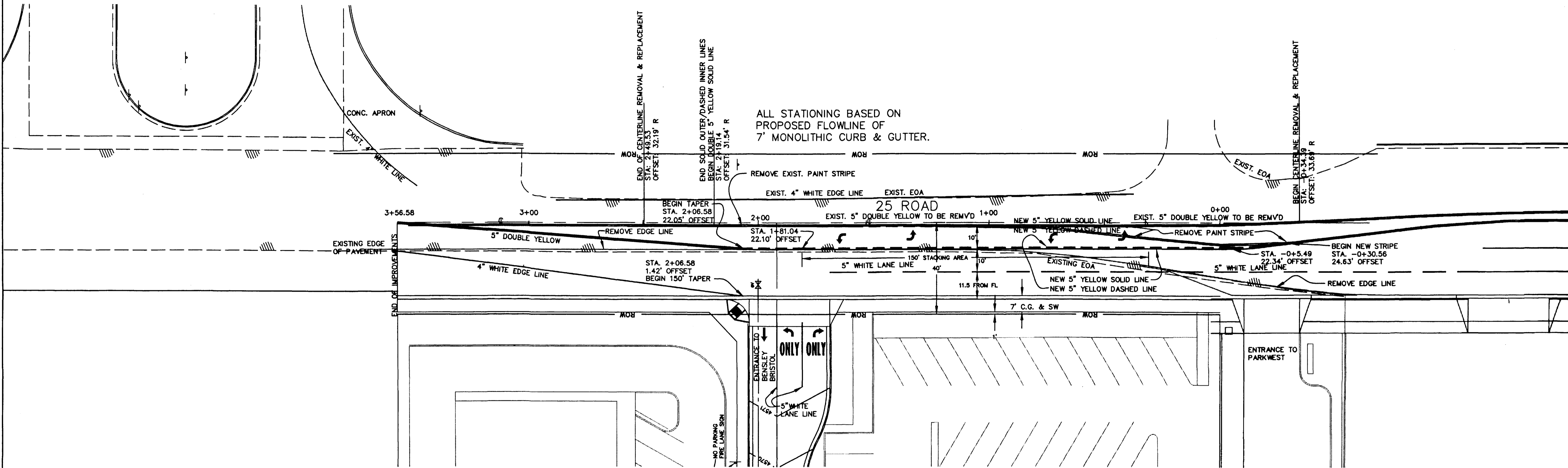
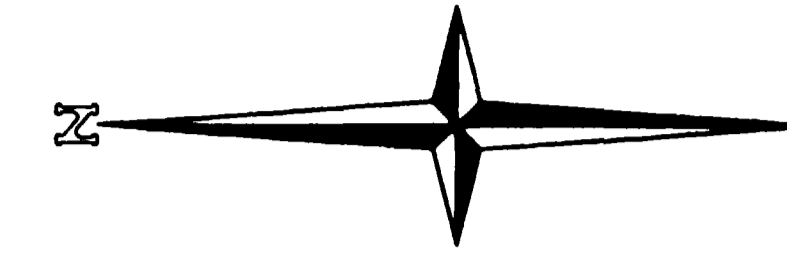
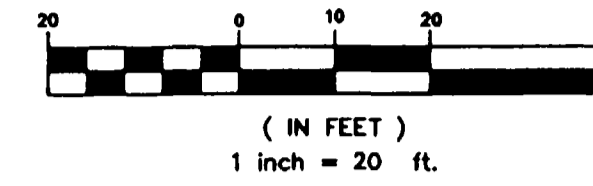
SUN KING MANAGEMENT CORP., P.O. BOX 3299, GRAND JUNCTION, COLORADO 970-245-9173
BENSLEY-BRISTOL MINOR SUBDIVISION SEWER PLAN & PROFILE
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 SCALE: Horiz: 1"=20'
 Vert: 1"=5'
 DATE: 3/2/98
 SHEET NO: 6 OF 11
 Project No: 0346-001

NOTE:
 CONTACT RICK RIPLEY AT CITY TRAFFIC SERVICES
 (PH: 244-1573) PRIOR TO PLACEMENT
 OF SIGNS, STRIPING, MARKINGS OR SIGNAL LOOPS.

ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH
 THE "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS"
 ADOPTED BY THE FEDERAL HIGHWAY ADMINISTRATION.

PAINT STRIPING MUST BE APPLIED AT A MINIMUM THICKNESS OF 15 MILS
 WITH APPLICATION OF GLASS BEADS OF 5-7 LBS/GALLON.
 ALL PERMANENT MARKINGS SUCH AS ARROWS, ONLY LEGEND, PREFERENTIAL
 AND BIKE LANE MARKINGS MUST EITHER BE AN APPROVED TAPE SUCH AS
 3M OR THERMOPLASTIC PAINT.

ACCEPTABLE METHODS FOR STRIPPING REMOVAL ARE
 GRINDING, SANDBLASTING OR SEALCOATING OF ENTIRE
 STREET.



APPROVED FOR CONSTRUCTION	FINAL ACCEPTANCE
CITY OF GRAND JUNCTION	CITY OF GRAND JUNCTION
DATE	DATE

DRAWN BY: CRK	PREPARED UNDER THE SUPERVISION OF JAMES E. LANGFORD P.E. NO. 14847
DESIGNED BY: JEL	REVIEWED _____
CHECKED BY: JEL	DATE: _____



THOMPSON-LANGFORD CORP.
 529 25 1/2 RD., SUITE B210
 GRAND JUNCTION, COLORADO
 PH. (970) 243-6067

REVISION	DATE	DESCRIPTION	BY	CHK'D
1	3/2/98	REVISIONS PER CITY REVIEW COMMENTS (2/5/98)	CRK	DAT
2	4/14/98	REVISIONS PER CITY REVIEW COMMENTS (4/13/98)	CRK	DAT

SUN KING MANAGEMENT CORP., P.O. BOX 3299, GRAND JUNCTION, COLORADO		970-245-9173
SCALE: 1" = 20'		JOB NO: 0346-001
DATE: 3/2/98		SHEET NO: 7 of 11