

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
2901 WEST DURANGO STREET
PHOENIX, ARIZONA 85009

CONSTRUCTION SPECIAL PROVISIONS **Flood C**

Property of
Flood Control District of MC Library
Please Return to
2801 W. Durango
Phoenix, AZ 85009

FOR

BROADWAY ROAD
FROM
43RD AVENUE TO 35TH AVENUE

WORK ORDER NO. 68237



Property of
Flood Control District of MC Library
Please Return to
2801 W. Durango
Phoenix, AZ 85009

Issued for Public Bidding by:

Renate P. Lewis

Renate P. Lewis
Transportation Procurement Officer

Date 8/25/94

SUPPLEMENTARY TO MARICOPA ASSOCIATION OF GOVERNMENTS UNIFORM
STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, EDITION OF
1993 AND REVISIONS AND SUPPLEMENTS THERETO.

A901.506

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
2901 WEST DURANGO STREET
PHOENIX, ARIZONA 85009

CONSTRUCTION SPECIAL PROVISIONS

FOR

BROADWAY ROAD
FROM
43RD AVENUE TO 35TH AVENUE

WORK ORDER NO. 68237



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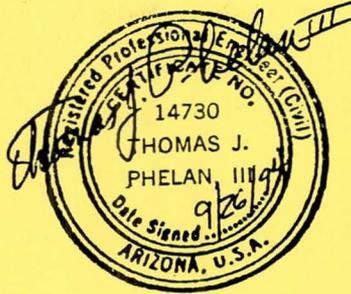
Date *8/25/94*

SUPPLEMENTARY TO MARICOPA ASSOCIATION OF GOVERNMENTS UNIFORM
STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, EDITION OF
1993 AND REVISIONS AND SUPPLEMENTS THERETO.

ADDENDUM NO. 2

September 26, 1994

TO CONTRACT DOCUMENTS



**Title: Broadway Road from 43rd Avenue to 35th Avenue
MCDOT Work Order Number 68237**

Owner: Maricopa County Department of Transportation

The above documents are herein modified. The provisions of said documents applicable to these modifications remain unchanged unless specifically indicated otherwise herein. This Addendum No. 2 forms a part of the Contract Documents and modifies the provisions as follows:

BIDDING SCHEDULE of Addendum No. 1 and the Special Provisions:

Addendum No. 1, Page 21 of 53:

Change, by pen and ink, Quantity for Item No. 220.42410, Riprap with Fabric from 550 Square Yards to 1,769 Square Yards.

Special Provisions, Page 22 of 53:

Change, by pen and ink, the Quantity for Item No. 350.08001 from 121 Linear Feet to 261 Linear Feet.

ADDENDUM NO. 1 DATED SEPTEMBER 20, 1994

ADDENDUM NO. 1 - PAGE 2 of 5 - SECTION 301 - SUBGRADE PREPARATION -

Replace the fifth (5th) paragraph of this section which begins with "Contractor shall determine optimum moisture ..." with the following:

"CONTRACTOR shall determine optimum moisture for compaction purposes. Field reports have indicated a range of optimum moisture from approximately twelve percent (12%) to approximately sixteen percent (16%). Preliminary laboratory reports indicate an average dry unit weight of approximately one hundred ten (110) pounds per cubic foot compacted. Unless otherwise requested by the Engineer, the total liquid content of the mixed material consisting of existing water in the soil, added water and bituminous binder shall be two percent (2%) less than the average optimum moisture content of fourteen percent (14%). **CONTRACTOR** shall submit a mix design for review and approval by the Engineer.

Change the following item on Sheet 8 of 44:

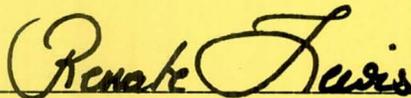
			SHEET NUMBERS								
ITEM NO.	ITEM DESCRIPTION	Unit							22	Total	
350.08001	Removal of Concrete Pipe	L. F.							140	261	

SHEET 21 of 44 - PLAN & PROFILE SHEET

Add a Removal Note 5 as follows:

(Note 5) Sta 18+00, 4' RT. to Sta 18+04, 36' LT. Remove 15" Concrete Pipe, 40 L. F. ,

ALL OTHER PROVISIONS SHALL REMAIN IN FULL FORCE AND EFFECT.

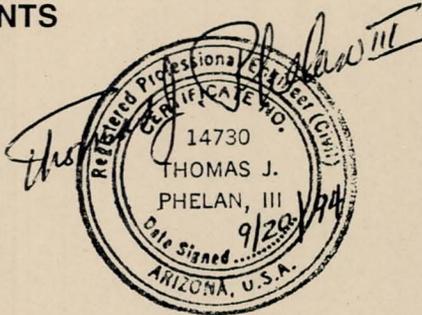


Transportation Procurement Officer

ADDENDUM NO. 1

September 20, 1994

TO CONTRACT DOCUMENTS



**Title: Broadway Road from 43rd Avenue to 35th Avenue
MCDOT Work Order Number 68237**

Owner: Maricopa County Department of Transportation

The above documents are herein modified. The provisions of said documents applicable to these modifications remain unchanged unless specifically indicated otherwise herein. This Addendum No. 1 forms a part of the Contract Documents and modifies the provisions as follows:

INVITATION TO BID

Change Page 1 of 53 of the CONSTRUCTION SPECIAL PROVISIONS to read as follows:

BID OPENING DATE: September 28, 1994

BIDDING SCHEDULE

Attach to the BIDDING SCHEDULE of the CONSTRUCTION SPECIAL PROVISIONS the enclosed REVISED SHEET 21 OF 53 and REVISED SHEET 25 of 53. By Pen and Ink cancel out the existing sheets 21 and 25 of 53.

CONSTRUCTION SPECIFICATIONS SECTION OF THE CONSTRUCTION SPECIAL PROVISIONS

PAGE 5 of 39 - SECTION 205.2 - REMOVAL OF UNSUITABLE MATERIAL

The following sentence is added to the bottom of the first paragraph:

"Soils containing petroleum stains (hydrocarbons) on the Shumway Property acquired as right-of-way were tested and found to be below the Arizona Department of Environmental Quality action threshold and therefore are NOT subject to hazardous material handling requirements. No other contamination was found during testing in other locations along the alignment."

PAGE 9 of 39 - SECTION 301 - SUBGRADE PREPARATION

After the first paragraph add the following:

"The work involved with excavation and recompaction of the material identified on Sheet 40 of 44 of the Plans as being in Zone 2 (Station 36+50 to Station 43+60) is incidental to the work of subgrade preparation.

Pieces of wood, plastic, and other discarded items within the project limits shall be removed from the project. The cost of this removal (with the exception of the removal of organic material - manure, wood, and similar material - shown on Sheet 40 of the Plans to be within Zone 3) is incidental to the work of subgrade preparation.

The work involved with shaping and compacting the border areas prior to placement of 2 inches of asphalt concrete on native soil in the border areas behind curb as shown in the plans is incidental to the work of subgrade preparation. The native soil in these areas under the 2 inches of border area paving shall be compacted to ninety percent (90%) optimum density.

CONTRACTOR shall construct a bituminous stabilized subgrade for a depth of 6 inches under all roadway and driveway pavements on Broadway Road from Sta 20+00 to Station 76+30 and on 43rd Avenue within the project limits. Within these limits and where the roadway section does not have curb and gutter, the bituminous stabilization shall also include stabilizing the dirt shoulder for a depth of 6 inches below finished grade and a width of 7 feet outside the edge of pavement. The cost of the work involved with stabilizing the shoulders shall be incidental to the work of subgrade preparation.

CONTRACTOR shall determine optimum moisture for compaction purposes. Field reports have indicated a range of optimum moisture from approximately 12% to approximately 16%. The subgrade shall be compacted with moisture approximately 2% below optimum. **CONTRACTOR** shall replace approximately 33% of the moisture with an equivalent percentage of emulsified asphalt binder and thoroughly blend and compact the subgrade with the mixture of water and emulsified asphalt binder to a depth of 6 inches. **CONTRACTOR** shall submit a mix design for review and approval of the Engineer. Application shall be by use of a Cross Shaft Pulvimixer with spray bar unless otherwise approved by the Engineer. The approval of the mix design or distribution, however, shall not exempt **CONTRACTOR** from the requirements of subgrade compaction in accordance with Section 301 of the Uniform Standard Specifications.

The cost of work associated with the application, blending and compacting of the soil material with water and emulsified asphalt binder shall be included in the unit price bid for subgrade preparation. The cost of emulsified asphalt binder shall be in accordance with Section 302 of these Construction Specifications.

Payment for subgrade preparation including bituminous stabilization will be made for the area under roadway pavement and driveway pavement only. Grading, filling, excavating, blending and compacting for all construction shown in the typical sections outside the limits of roadway and driveway pavement is considered incidental to subgrade preparation.

Cross-sections, driveway profiles, and soils reports developed during the design process are available for review at the Customer Service Center of the Maricopa County Department of Transportation Offices. At **CONTRACTOR'S** option, **CONTRACTOR** may obtain copies of these items by ordering any or all of the items approximately 24-hours in advance by calling 506-8600 and paying the cost of reproduction."

PAGE 9 of 39 - **ADD THE FOLLOWING SECTION:**

"SECTION 302 - BITUMINOUS MATERIAL FOR SUBGRADE STABILIZATION:
CONTRACTOR shall add emulsified asphalt binder to the subgrade material. Product chemistry, storage, temperature control, handling, application and blending shall be in accordance with the manufacturer's recommendations and these Construction Specifications. The emulsified asphalt binder shall be Cyclogen or other bituminous material approved equal and in compliance with appropriate requirements of Section 713 of the Uniform Specifications. Dilution and rate application shall be as established by the Mix Design or as requested by the Engineer.

The requirements of this Section shall also apply to the stabilization of the shoulder areas as described in Section 301 of these Construction Specifications.

Measurement of BITUMINOUS MATERIAL FOR SUBGRADE STABILIZATION shall include the area under roadway and driveway pavement and the area of the dirt shoulders as described in Section 301 of these Construction Specifications.

Payment for BITUMINOUS MATERIAL FOR SUBGRADE STABILIZATION will be made at the unit bid price per square yard, which price shall be full compensation for the bituminous material, COMPLETE-IN-PLACE."

PAGE 10 of 39 - **SECTION 321 - ASPHALT CONCRETE:**

After the last paragraph add the following:

"Border area pavement behind curbing as shown in the plans shall be asphaltic concrete (C 3/4), two inches (2") thick, over compacted native soil."

PAGE 12 of 39 - SECTION 340 - CONCRETE CURB, GUTTER, SIDEWALK, DRIVEWAY ENTRANCE AND ALLEY ENTRANCE:

After the second paragraph add the following:

"The length of concrete driveway shall be 5 feet for Drive Number 22, 25, 29, 30 and 31 as noted on Plan Sheet 19 of 44 and for the new concrete driveway on Sheet 22 of 44. An asphalt concrete driveway of the same width shall be constructed from the back of these concrete driveways to the right-of-way line. Driveway slopes shown for these drives on Plan Sheet 13 of 44 shall only apply to the asphalt portion of the driveway. Payment for these asphaltic concrete driveways will be in accordance with the appropriate pay items for Subgrade Preparation, Aggregate Base and Asphalt Concrete in accordance with these Construction Specifications.

The length of concrete driveway shall extend from the back of curb to the right-of-way line for Drive Number 23 and 24 on Plan Sheet 13 of 44."

PAGE 13 of 39 - SECTION 350 - REMOVAL OF EXISTING IMPROVEMENTS:

After the second paragraph add the following:

"The cost of work associated with the removal of existing concrete driveways in order to construct new concrete driveways shall be included in the cost for Removal of Existing Improvements. The cost of work associated with the removal of the concrete manhole and junction box located at approximately Broadway Road Station 36+30 shall be included in the cost for Removal of Existing Improvements."

PAGE 34 of 39 - SECTION 618 - STORM DRAIN CONSTRUCTION WITH CONCRETE PIPE:

After the second paragraph add the following:

"Cast-In-Place Concrete Pipe may be used as an alternative to the 1327 lineal feet of 36-inch Reinforced Concrete Pipe shown in the Bidding Schedule under Item 618.02336 and shown on Plan Sheets 14, 15 and 16 of 44. At the time of the Pre-Construction Conference, **CONTRACTOR** shall notify the Engineer of the type of 36-inch pipe to be installed."

PLANS

SHEETS 8 through 10 of 44 - Summary of Estimated Quantities

Add the following item to Sheet 8 of 44:

ITEM	ITEM DESCRIPTION	UNIT	TOTAL
302.0000	Bituminous Material for Subgrade Stabilization	S.Y.	35,000

**ADDENDUM NO. 1
 SEPTEMBER 20, 1994
 PAGE 5 OF 5**

Change the following items on Sheet 8 of 44:

			SHEET NUMBERS							
ITEM NO.	ITEM DESCRIPTION	UNIT	13	14	15	16	19	22	21	Total
205.0000	Roadway Exc. (Unsuitable Material)	C.Y.	726	2592	389	1244				4951
310.07100	Aggregate Base	Ton					4520	675		25529
321.02100	A. C. Pavement (C3/4)	Ton					1230	185		6915
340.09953	Concrete Driveway	S.F.					2475	250		2725

Change the following item on Sheet 10 of 44:

			SHEET NUMBERS							
ITEM NO.	ITEM DESCRIPTION	Unit	13	14	15	16	19	22	21	Total
624.0012	12 " Irrigation Valve w/ Conc. Basin	Ea.							5	5

SHEET 21 OF 44 - Change New Construction Note 15 to read as follows:

"(Note 15) Sta 16+35, 16+60, 17+00, 17+22, 17+45, Lt. - Install 5 - 12" Irrigation Valves with Concrete Scouring Basins (MAG 506)."

SHEET 22 of 44 - Add the following note:

"New Construction Note 7: Sta 18+60 Construct Concrete Driveway, Width 40', length 5', City of Phoenix Std. Detail 1255 and Install 40 foot wide A.C. Driveway from Concrete Driveway to right-of-way line."

SHEET 40 OF 44 - Replace this sheet with SHEET 40 of 44 (REVISED 9/15/94) - This sheet is attached to this Addendum.

ALL OTHER PROVISIONS SHALL REMAIN IN FULL FORCE AND EFFECT.

R.E. Gage

 Transportation Procurement Officer

BIDDING SCHEDULE

BROADWAY ROAD, 43 RD AVENUE TO 35 TH AVENUE, MCDOT WORK ORDER # 68237

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
107.01100	NPDES	1	L.S.		
107.15000	Community Relations (Allowance)	1	Allowance	\$25,000.00	\$25,000.00
110.01000	Mobilization	1	L.S.		
205.00000	Roadway Excavation (Unsuitable Material)	4951	C.Y.		
220.42410	Riprap with Fabric	550	S.Y.		
225.09000	Watering	2525	1000 GAL		
301.02000	Subgrade Preparation	50221	S.Y.		
302.00000	Bituminous material for Subgrade Stabilisation	35000	S.Y.		
310.07100	Aggregate Base	25529	TON		
315.07000	Bituminous Prime Coat , (Contingent Item)	65	TON		
321.02100	Asphalt Concrete Pavement (C-3/4)(2-1/2 ")	6915	TON		
321.02240	Paved Detour	4500	S.Y.		
321.03100	Asphalt Concrete Pavement (D-1/2)(1-1/2 ")	4129	TON		
329.07000	Bituminous Tack Coat, (Diluted)(Contingent Item)	21	TON		
333.00100	Fog Seal Coat (Contingent Item)	21	TON		
333.00200	Blotter Sand (Contingent Item)	22	TON		
340.00025	Conc. Single Curb MAG Std 222, Type 'A'	1499	LF.		
340.01125	Conc. Curb & Gutter, MAG Std 220, Type 'A', H=6	3051	L.F.		
340.09953	Concrete Driveway Entrance	2725	S.F.		
340.22945	Conc. Sidewalk Ramp, Type " A " (COP-P1233)	3	Each		
340.23959	Alley Entrance (COP Std P1255)	340	S.F.		
345.01100	Adjust WV Frame and Cover, MAG Std 391-1 (Type A)	17	Each		

BIDDING SCHEDULE

'BROADWAY ROAD, 43 RD AVENUE TO 35 TH AVENUE, MCDOT WORK ORDER # 68237

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
623.01124	Conc Headwall (1-24") (MAG Std-501-1,2, Modified, U Type)	1	Each		
623.01142	Conc Headwall (1-42") (MAG Std-501-1,2, Modified, U Type)	1	Each		
623.01230	Conc Headwall (1-30")(MAG Std-501-1,2, U Type)	1	Each		
623.01348	Conc Headwall (1-48")(MAG Std -501-1,2, Modified, L Type)	1	Each		
623.11542	Access Barrier (COP P1563,ADOT C-13.80)H=42"W=32"(Dbl Hinge)	1	Each		
623.11548	Access Barrier (COP P1563,ADOT C-13.80)H=92"W=32"(Dbl Hinge)	1	Each		
623.11594	Access Barrier (COP P1563,ADOT C-13.80)H=86"W=32"(Dbl Hinge)	1	Each		
623.11596	Access Barrier (COP P1563,ADOT C-13.80)H=98"W=32"(Dbl Hinge)	2	Each		
623.41024	NeenahType SF 24" Automatic Drainage Gate W/Cast Iron Cover	1	Each		
623.41030	NeenahType SF 30" Automatic Drainage Gate W/Cast Iron Cover	1	Each		
623.41048	NeenahType SF 48" Automatic Drainage Gate W/Cast Iron Cover	1	Each		
624.00012	12" Irrigation Valve Installation with Concrete Scouring Basin	5	Each		
625.01000	48 " Storm Drain M.H. (MAG Std - 522 Shaft COP 1520 Base)	10	Each		
625.01001	48" Sewer Manhole (MAG 420)	2	Each		
630.00100	12" x 12" Tapping Sleeve & Valve (MAG 340)	1	Each		
630.03100	Valve, 12" and under (MAG 301)	2	Each		
631.00000	Abandon Well	1	Each		
635.00000	Ditch Lining with Welded Wire Fabric	380	S.Y.		

CONTRACTOR _____ TOTAL BID AMOUNT _____

ATTENTION
ALL PROSPECTIVE BIDDERS

A.R.S. Sec. 34-201 now requires that construction bid proposals be accompanied by a certified check, cashiers check or surety bond for ten percent (10%) of the total amount of the bid.

All bonds must be executed solely by a surety company or companies holding a Certificate of Authority to transact surety business in Arizona, issued by the Director of the (State) Department of Insurance.

Bonds (bid, payment and performance) executed by an individual surety or sureties are not in compliance with the Arizona Revised Statutes.

Bids received containing bid bonds not in compliance with the Arizona Revised Statutes will be considered as being non-responsive. The use of County-supplied bond forms is encouraged, but is not mandatory.

Please submit your bids accordingly.

PLEASE MAKE A NOTE THAT THE TRAFFIC CONTROL AND TRAFFIC REGULATIONS SECTIONS OF THE SITE REGULATIONS HAVE BEEN CHANGED.

**MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
MCDOT WORK ORDER NO. 68237**

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**MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
INVITATION TO BID**

BID OPENING DATE: September 21, 1994

LOCATION:

The project is located on Broadway Road, immediately south of the Salt River, 43rd Avenue to 35th Avenue.

PROPOSED WORK:

The work consists of subgrade preparation, asphalt roadway construction, storm drain system construction, intersection signalization, and other miscellaneous items of work required for the completion of the project.

BIDS:

SEALED BIDS for the proposed work will be received by the Maricopa County Department of Transportation, 2901 West Durango Street, Phoenix, Arizona 85009 until 2:00 p.m. (Phoenix time) on the above date and then publicly opened and read at 2901 West Durango Street, Phoenix, Arizona 85009. No bids will be received after the time specified for bid opening. All bids must be submitted on proposal forms furnished by the Maricopa County Department of Transportation and included in the Proposal Pamphlet. The Board of Supervisors reserves the right to reject any and all bids and to waive any informality in any bid received.

ELIGIBILITY OF CONTRACTOR:

It is the policy of the Maricopa County Department of Transportation to endeavor to ensure in every way possible that minority and women-owned business enterprises have every opportunity to participate in providing professional services, purchased goods, and contractual services without being discriminated against on the grounds of race, religion, sex, age, disability, or national origin.

The bidder shall be required to certify that the bidder and any proposed subcontractors are appropriately licensed as Contractors in the State of Arizona for performing the before-mentioned type of work. Verification shall be on the form provided herein.

The bidder may be required to furnish an affidavit as evidence of previous satisfactory performance in the above-mentioned type of work.

CONTRACT TIME:

All work on this Contract is to be completed within One Hundred Sixty-Five (165) calendar days after date of Notice to Proceed.

MBE/WBE PARTICIPATION:

For this contract, a combined M/WBE goal of ten percent (10%) percent is established for Minority/Women-Owned Business Enterprises. Instructions and required forms are included in the Minority and Women-Owned Business Enterprise Program Contracting Requirements section. The Maricopa County Minority and Women-Owned Business Enterprise Program, effective January 1, 1992, is incorporated by reference.

PRE-BID CONFERENCE:

A pre-bid conference will be held on September 8, 1994 at 2:00 p.m. in the Maricopa County Department of Transportation conference room, 2901 West Durango Street, Phoenix, Arizona 85009. It is in the best interest of prospective bidders to attend the Pre-Bid Conference.

Questions or items for clarification may be addressed to the Manager, Contracting Branch, in writing, at least ten (10) days prior to bid opening date. Where appropriate, any answers or clarifications affecting the cost may be addressed to all bidders in an addendum. Under no circumstances will verbal interpretations or clarifications be given to individual contractors.

PROJECT PLANS, SPECIAL PROVISIONS AND CONTRACT DOCUMENTS:

Plans and Construction Specifications may be obtained from the Maricopa County Department Transportation, 2901 West Durango Street, Phoenix, Arizona 85009 upon payment by check, payable to the TREASURER OF MARICOPA COUNTY.

Reduced Plans (11' x 17')

Pickup at 2901 West Durango Street **\$35.00**
or with

Mail out (additional \$10.00) **\$45.00**

Full size plans are available by calling 506-8600 at least **one full working day in advance**, as follows:

Full Size Plans (24" x 36")

Pickup at 2901 West Durango Street **\$50.00**
or with

Mail out (additional \$15.00) **\$65.00**

We cannot guarantee mail delivery.

Each bid must be accompanied by a Surety Bond, cashier's or certified check or postal money order equal to **ten percent (10%)** of the bid, made payable to the TREASURER OF MARICOPA COUNTY as a guarantee that if the work is awarded to the bidder, the bidder will within ten (10) days from the date of Notice of Award, enter into proper contract and bond condition for the faithful performance of the work, otherwise, said amount may be forfeited to the BOARD OF SUPERVISORS as liquidated damages.

All bids are to be marked in accordance with Section 102.9 of the Uniform Standard Specifications.

PRINCIPLE ITEMS AND APPROXIMATE QUANTITIES

<u>QUANTITY</u>	<u>UNIT</u>	<u>DESCRIPTION</u>
50,221	SY	Subgrade Preparation
25,427	Tons	Aggregate Base
6,878	Tons	Asphalt Concrete Pavement (C-3/4)(2-1/2")
4,129	Tons	Asphalt Concrete Pavement (D-1/2)(1-1/2")
1,499	LF	Conc. Single Curb MAG Std 222, Type "A"
3,051	LF	Conc. Curb & Gutter, MAG Std 220, Type "A", H=6
4	Ea.	Type "A" Pole Foundation
4	Ea.	Type "M" Pole Foundation
526	LF	12" Diam. Asbestos Cement Pipe
81	LF	6" VCP
269	LF	8" VCP
753	LF	18" RGRCP, Class III
1,765	LF	24" RGRCP, Class III
274	LF	30" RGRCP, Class III
1,327	LF	36" RGRCP, Class III
84	LF	42" RGRCP, Class III
208	LF	48" RGRCP, Class III
10	Ea.	48" Storm Drain M.H. (MAG Std - 522 Shaft COP 1520 Base)

ADMINISTRATIVE REQUIREMENTS

1. REFERENCE DOCUMENTS

The work described in the construction specifications and shown on the plans and drawings for this project, shall be performed in accordance with the Maricopa County Association of Governments 1992 issue of the Uniform Standard Specifications for public works construction, and all revisions thereto, the Maricopa County Highway Department Supplements to the Uniform Standard Specifications, dated August 3, 1981 and all subsequent revisions thereto, and the construction specifications, attached hereto.

In the event of a conflict between the plans, the construction specifications, the Maricopa Association of Governments Uniform Standard Specifications, the Maricopa County Highway Department Supplements to the Uniform Standard Specifications or subsequent revisions thereto, the Site Regulations and Administrative Requirements, exist, the order of precedence shall be as follows: the project plans, the construction specifications, the Maricopa County Highway Department Supplements to the Uniform Standard Specifications and all revisions thereto, and the Maricopa County Association of Governments 1992 issue of the Uniform Standard Specifications for Public Works and all revisions thereto, the General Site Regulations, and Administrative Requirements.

2. ADDENDA (SECTION 102)

It shall be the responsibility of the prospective bidder to determine, prior to the submittal of its bid, if any addenda to the construction special provisions have been issued by Maricopa County Department of Transportation. All addenda issued, if not already bound in the construction special provisions, shall be submitted by bidder with its bid and noted in the proposal section of the construction special provisions. Any quantity adjustment, required as a result of the addendum, shall be reflected on the bidding schedule in pen and ink.

Bids which do not reflect the appropriate changes on the bidding schedule, do not have all issued addenda attached and noted in the proposal section of the Contract, will be rejected by the **COUNTY**.

Prospective bidders may call Maricopa County Department of Transportation in order to ascertain if addenda have been issued for this project.

3. PROPOSAL PREPARATION (SECTION 102.5)

CONTRACTOR shall submit the entire construction specifications document intact and shall complete and submit the following documents with its bid:

- 3.1 No Collusion Affidavit - form must be filled out, signed and notarized.
- 3.2 Verification of License - form must be filled out, dated and signed.

- 3.3 MBE/WBE Assurance Affidavit - select one of two options, sign and notarize form.
- 3.4 Proposal - appropriate sections of the form must be filled out, addenda listed, if any, and signed.
- 3.5 Bidding Schedule - must include unit costs, amounts per bid item, and total bid amount. Addenda, if any, must be listed. All notations in the bidding schedule must be legible and in pen or ink.
- 3.6 Surety Bond - proposals must be accompanied by a certified check, cashiers check, or a surety bond for an amount equal to ten percent (10%) of the total amount bid.
- 3.7 All addenda issued by the **COUNTY** for the specific project must be included with the bid and noted on the second page of the proposal.

Other forms - execution of the Contract, submittal of the Performance/Payment Bond and the Certificate of Insurance is not required at the time of bid submittal. These documents must be submitted to the **COUNTY** by the successful bidder at time of contract execution.

CONTRACTOR may be required to provide proof of satisfactory completion of similar public works projects.

4. PRE-CONSTRUCTION CONFERENCE

After execution of the Contract by both parties and prior to the commencement of the work, the **ENGINEER** will schedule a pre-construction conference at the facilities of the Maricopa County Department of Transportation located at 2901 West Durango Street, Phoenix, AZ 85009. **CONTRACTOR** shall be represented at a minimum by a company official with signature authority on behalf of its organization.

CONTRACTOR shall submit to the **ENGINEER** during the pre-construction conference the following documents:

- 4.1 List of all subcontractors
- 4.2 List of all material sources
- 4.3 Mix design composition
- 4.4 Manufacturer's certification for all materials
- 4.5 Material data safety sheets
- 4.6 Preliminary work schedule
- 4.7 Preliminary traffic plan
- 4.8 Shop drawings
- 4.9 Emergency telephone numbers
- 4.10 Signing authority letter
- 4.11 Name and telephone number of the certified safety professional

The pre-construction conference will cover topics such as critical elements of the work schedule, payment application and the processing of invoices. Representatives of the utilities with facilities in the construction area will coordinate their activities with **CONTRACTOR**. Additionally, a scheduled start date for the work will be determined.

5. **PERMITS (SECTION 107.2)**

It is **CONTRACTOR'S** responsibility to obtain all permits and licenses, pay all fees, charges, and taxes and prepare all required notices for the lawful execution of the work. Permits for earth moving may be obtained from Air Pollution Control, Maricopa County Department of Environmental Management, 2406 South 24th Street, Suite E-214, Phoenix, Arizona 85034, Telephone Number 506-6700.

6. **CONSTRUCTION SCHEDULE (SECTION 108.4)**

CONTRACTOR shall be solely responsible for the planning, scheduling and execution of the work to assure timely completion of the project.

CONTRACTOR shall submit its construction schedule to the **COUNTY** in form of a preliminary and, after acceptance by the **ENGINEER**, a final format incorporating the various phases of construction and in accordance with Section 401 of the construction specifications.

6.1 The preliminary schedule shall be submitted to the **COUNTY** in triplicate for review and approval at the pre-construction conference. The schedule shall be a schematic (arrow) or precedence diagram, reflecting the work stages and all activities required for the successful completion of the project. The schedule shall show enough detail to allow day to day monitoring of **CONTRACTOR'S** operation and shall include major milestone dates for the work.

6.2 **CONTRACTOR** shall submit the final schedule to the **COUNTY** in triplicate no later than ten (10) calendar days after **ENGINEER'S** approval of the preliminary schedule. The final schedule shall include a complete critical path schedule and shall include a detailed network diagram, acceptable to the **ENGINEER**, with the following elements:

6.2.1 **CONTRACTOR'S** final schedule shall be time scaled in calendar days and all activities shall be recorded from the initial start dates to their completion dates. Unless specific approval was given by the **ENGINEER**, the individual activities shall not exceed fifteen (15) calendar days in length. The plot size and scale shall be acceptable to the **ENGINEER**.

6.2.2 The schedule shall reflect the order and the individual categories for each activity described in section 6.2.7, below. Critical activities shall be highlighted by use of color or any other method acceptable to the **ENGINEER**.

6.2.3 The schedule shall include, in addition to all construction activities, such tasks as mobilization, demobilization, submittal and approval of material samples and shop drawings, procurement of major material and equipment items, fabrication of special items and the installation and testing of such items. The schedule shall also reflect coordination activities with other projects.

6.2.4 Activities shall show sufficient detail to allow the reviewer to easily follow the sequence of the work, for example, forming, reinforcing and placement of concrete on the specific calendar days such activities are scheduled.

6.2.5 The diagram shall show each activity, the preceding and the following activity, the activity description, the total float time, and the duration of the activity in working days.

6.2.6 Activity descriptions on the diagram shall be job-specific and not of a generic nature.

6.2.7 In addition to the diagram, **CONTRACTOR** shall submit a schedule report of the network outlining the following data for each activity:

- preceding and following event and activity numbers
- activity description
- activity duration
- earliest commencement date
- earliest completion date
- latest commencement date
- latest completion date
- total float times
- responsible party for specific activity

6.3 **CONTRACTOR** shall update its schedule as mandated by the following events or as requested by the **ENGINEER**.

6.3.1 **CONTRACTOR** shall submit to the **COUNTY** on the tenth (10th) working day of each month a construction progress report (three originals and three copies) describing all completed or in progress activities and the level of completions of all activities to date in connection with this project. Detailed information shall be given for all negative float time. If the **ENGINEER** determines that any or all parts of the network diagram requires revision, **CONTRACTOR** shall furnish the **COUNTY** with the requested revisions within ten (10) calendar days of such request.

- 6.3.2 The monthly report shall be accompanied by a brief description of the job progress, problems encountered, current and anticipated delaying factors and the potential impact on the project schedule, and a description of corrective measures taken or proposed. It shall also include any departures from earlier schedules, including but not limited to, logical sequence or logical ties, constraints, changes in scheduled activities and the duration of such changes, addition or deletion of event numbers, activity numbers and activity descriptions. **CONTRACTOR** shall outline the reason for the departure from the original schedule. All changes to the milestone events require the **ENGINEER'S** prior approval.
- 6.3.3 All costs and expenses incurred by **CONTRACTOR** during the preparation of all schedules and/or reports described in Section 6, above, and all revisions thereto, are considered an overhead item and therefore not reimbursable as a separate pay item.
- 6.3.4 In addition to allowances for various activities in connection with the work, **CONTRACTOR** shall base the schedule on normal weather conditions and shall incorporate the following factors:
- procurement and shipping times for material
 - concrete curing time
 - reasonable allowances for relocation of utilities
- 6.3.5 The **ENGINEER'S** review and approval of the schedule shall not constitute an acceptance of responsibility by the **COUNTY** for the content of the schedule and shall not relieve **CONTRACTOR** of its obligations to commit all its resources to meet the schedule set forth in the construction specifications. The **ENGINEER'S** approval of the schedule shall not constitute a basis for additional time to complete the work specified in the scope of work nor shall it serve as basis for additional compensation.

7. PAYMENT

- 7.1 The "complete-in-place" rate shall include but not necessarily be limited to all labor, material and equipment costs for preparation, installation, construction, modification, alteration or adjustment of the items, which shall include all costs for salaries and wages, all payroll additives to cover employee benefits, allowances for vacation and sick leave, company portion of employee insurance, social and retirement benefits, all payroll taxes, contributions and benefits imposed by any applicable law or regulation and any other direct or indirect payroll-related costs. The rate shall also include but not necessarily be limited to all costs for indirect charges or overhead, mileage, travel time, subsistence, materials, freight charges for material to **CONTRACTOR'S** facility or project site, equipment rental, consumables, tools, insurance to the levels specified in Section 103.6, **CONTRACTOR'S INSURANCE**, all applicable taxes, as well as **CONTRACTOR'S** fee and profit. This rate shall further include all site clean-up costs and hauling of construction debris to disposal sites designated by the **ENGINEER**.

- 7.2 Payment will be made for only those items listed in the proposal and will not be made in accordance with the measurement and payment provisions of the MAG Standard Specifications where this differs from the items listed in the proposal. All materials and work necessary for completion of this project are included in proposal items. Any work or materials not specifically referred to in these items are considered incidental to the item and are included in the unit price.

Payment shall not be made for unused materials.

- 7.3 It is the responsibility of the bidders to contact all municipalities in the area to determine if they will charge **CONTRACTOR** sales taxes or any other fees for work on this project. Any such taxes or fees shall be paid by **CONTRACTOR**.

8. **PAYMENT FOR BOND ISSUES AND BUDGET PROJECTS (SECTION 109.7)**

Add the following paragraph:

The **COUNTY** will accept securities in a form and from a financial institution acceptable to the **COUNTY**, in accordance with the Arizona Revised statutes, Section 34-221, as amended, in lieu of ten percent (10%) retainage on pay estimates, if requested by **CONTRACTOR**.

9. **MATERIALS SOURCES**

All materials not specifically noted as provided by the **COUNTY** or other participating agency shall be obtained from commercial sources. **CONTRACTOR** shall pay all royalties or any other charges or expenses incurred in connection with the securing and hauling of the material. **CONTRACTOR** shall provide the **ENGINEER** with a list of proposed commercial sources prior to utilization of such sources and shall present satisfactory evidence that the material obtained from the commercial sources meets the specifications of this project.

(END OF SECTION)

SUPPLEMENTARY GENERAL PROVISIONS

1. DEFINITION OF TERMS (SUBSECTION 101.2)

- 1.1 Add the definition Maricopa County Minority Business Office "(MBO)"; the office responsible for administering the Maricopa County Minority and Woman-Owned Business Enterprise Program.
- 1.2 Add the definition Maricopa County Minority and Woman-Owned Business Enterprise Program, "(MBE/WBE)" as being the program adopted by the Board of Supervisors, effective January 1, 1992.
- 1.3 Add the definition "COUNTY" as being the Maricopa County Department of Transportation, acting through its legally constituted officials, officers, or designated employees.
- 1.4 Add the definition "Americans With Disabilities Act of 1990 (ADA)" as the act that makes it unlawful to discriminate in employment and/or service provision, against a qualified individual with a disability.

2. COORDINATION OF PLANS AND SPECIFICATIONS

CONTRACTOR shall perform the work under this Contract in accordance with the intent of the drawings and construction specifications and shall not take advantage of any error or omission in the drawings and/or construction specifications. In the event **CONTRACTOR** discovers an error or omission in the drawings and/or construction specifications, **CONTRACTOR** shall promptly advise the **ENGINEER** of such an error or omission. If **CONTRACTOR** fails to notify the **ENGINEER** of an error or omission in the drawings and/or construction specifications, which **CONTRACTOR** has discovered or should have discovered through the exercise of reasonable diligence, any additional work required as the result of such errors or omissions, shall be compensated by the **COUNTY** on a force account basis and such compensation shall be the exclusive compensation to **CONTRACTOR** for any costs, expenses or damages resulting directly or indirectly from the correction of such errors and omissions.

3. INSURANCE (SECTION 103.6)

CONTRACTOR shall provide and maintain, with insurers acceptable to the **COUNTY**, until all obligations under this Contract are satisfied, the following insurance coverages:

- 3.1 Commercial General Liability insurance with a combined single limit of FIVE MILLION DOLLARS (\$ 5,000,000) each occurrence. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, contractor's protective, products and completed operations. The policy shall also include coverage for hazards commonly referred to as XCU. Said policy shall contain a severability of interest provision. The products and completed operations coverage shall extend for two (2) years past acceptance, cancellation, or termination of the services.

In addition to the Certificate(s) of Insurance, **CONTRACTOR** shall furnish to the **COUNTY** an endorsement specifying the separate project aggregate and XCU coverage, signed by an Underwriter or an authorized representative of the insurance company.

- 3.2 Comprehensive Automobile Liability insurance with a combined single limit for bodily injury and property damage of FIVE MILLION DOLLARS (\$5,000,000) each occurrence with respect to **CONTRACTOR'S** vehicles whether owned, hired, or non-owned, assigned to or used in the performance of the work.
- 3.3 Worker's Compensation insurance to cover obligations by federal or state statutes having jurisdiction of **CONTRACTOR'S** employees engaged in the performance of the work, and Employer's Liability insurance with a limit of ONE MILLION DOLLARS (\$ 1,000,000) each accident.
- 3.4 The policies required by Sections 3.1 and 3.2, above, shall be endorsed to include Maricopa County, all of its officers, agents, employees, elected officials, and representatives, and such insurance shall be primary insurance and insurance carried by the **COUNTY** shall not be contributory insurance.

The Certificate of Insurance furnished by **CONTRACTOR** shall reflect the precise language of the added insured clause stated on the sample certificate.

- 3.5 **CONTRACTOR** and its insurers providing the required coverages shall waive all rights of recovery against the **COUNTY**, all of its officers, agents, employees, elected officials, representatives.
- 3.6 Concurrent with the execution of the contract, **CONTRACTOR** shall furnish the **COUNTY** with certificates of insurance issued by **CONTRACTOR'S** insurer, in a form acceptable to the **COUNTY**, as evidence that the policies and endorsements provide the required coverages and limits and comply with the requirements of this section 3 and are in full force and effect. Such certificates shall provide for not less than thirty (30) days notice of cancellation, termination or alteration. Such notices shall be sent directly to the **COUNTY** and addressed as follows:

Maricopa County Department of Transportation
Manager, Contracting Branch
2901 West Durango Street
Phoenix, AZ 85009

The **COUNTY'S** failure to request Certificates of Insurance or maintain current certificates on file, shall not relieve **CONTRACTOR** of its obligation to maintain the coverages specified in this Section 3.

The **COUNTY** reserves the right to request and receive certified copies of any and or all of the above policies and/or endorsements. The **COUNTY** shall not be obligated, however, to review such policies and/or endorsements or to advise **CONTRACTOR** of any deficiencies in such policies and/or endorsements, and such receipt shall not relieve **CONTRACTOR** from or shall be deemed a waiver of the **COUNTY'S** right to insist on strict fulfillment of **CONTRACTOR'S** obligation of the requirements of this Section 3.

- 3.7 The stipulation of insurance coverage in this Section 3 shall not be construed to limit or waive any liabilities or other obligations of **CONTRACTOR** or the **COUNTY** or any other parties in connection with this Contract or the work performed.

4. **INDEMNIFICATION (SECTION 103.6.2)**

- 4.1 Pursuant to Section 103.6.2 of the Maricopa Association of Governments (MAG) Standard Specifications, **CONTRACTOR** shall indemnify and save harmless the **COUNTY**, all of its officers, agents, employees, elected officials, representatives, insurers, and any jurisdiction or agencies issuing permits for any work included in this project, their officers and employees (hereinafter collectively referred to as "**INDEMNITEE(S)**") from any and all loss, cost, damage, and expense of any kind and description, including but not limited to, attorneys' fees and litigation expenses that may be incurred by any **INDEMNITEE** on account of a) any loss of or damage to any property of the **COUNTY**, any other participating agency or any third party, or b) any injury or death of any person, including but not limited to, employees of the **COUNTY**, **CONTRACTOR**, and subcontractors, which arises out of or results from, in whole or in part, any act, omission, fault, mistake, or negligence of **CONTRACTOR**, its employees, agents, representatives, or subcontractors, their employees, agents, or representatives, in connection with or in any way related to the work under this Contract.
- 4.2 **CONTRACTOR'S** obligation under this Section 4 shall apply, without limitation, to: a) those liability-causing events in which **CONTRACTOR**, its employees, agents, representatives, or subcontractors, their employees, agents, or representatives, are negligent; b) the condition of the equipment, tools, and material used and/or the methods utilized in, or the manner of, performing the work; c) any claims under workers compensation, unemployment compensation, unemployment disability compensation, or similar such laws and obligations applicable to employees of **CONTRACTOR** and/or its subcontractors; d) any valid claim made by any **INDEMNITEE** against **CONTRACTOR** for enforcement of any indemnity under this Contract.
- 4.3 **CONTRACTOR** shall defend each **INDEMNITEE** against all claims, demands, suits, actions, and proceedings for which **CONTRACTOR** has, or potentially has, indemnification responsibility under this Section 4. The **COUNTY** shall have the right, at its sole discretion, on its own behalf or on behalf of any other **INDEMNITEE**, to participate in such defense to whatever extent the **COUNTY** deems necessary to protect its own interest or that of other **INDEMNITEE**, and **CONTRACTOR** shall cooperate fully with the **COUNTY** in any such participation.

5. **NEGOTIATION CLAUSE**

Recovery of expenses incurred by **CONTRACTOR** for a delay for which the **COUNTY** is responsible, and which is unreasonable under the circumstances and which was not contemplated by the parties, shall be negotiated between **CONTRACTOR** and the **COUNTY**. This provision shall not be construed to void any provisions of the Contract which required notice of delays, provides for arbitration or other procedures for settlement, or provides for the assessment of liquidated damages.

6. **SUBSTITUTES AND "OR EQUAL" ITEMS (SUBSECTION 105.2.1)**

6.1 Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular supplier, the specification or description is intended to establish the type, function and quantity required. Unless the specification or description contains or is followed by words reading that no like, equivalent or "or-equal" item or no substitution is permitted, other items of material or equipment of other suppliers may be accepted by **ENGINEER** under the following circumstances:

6.1.1 "Or-Equal": If in **ENGINEER'S** sole discretion an item of material or equipment proposed by **CONTRACTOR** is functionally equal to that named and sufficiently similar so that no change in related work will be required, it may be considered by **ENGINEER** as an "or-equal" item, in which case review and approval of the proposed item may, at **ENGINEER'S** sole discretion, be accomplished without compliance with some or all of the requirements for acceptance of proposed substitute items.

6.1.2 Substitute Items: If in the **ENGINEER'S** opinion an item does not qualify as an "or-equal" item under 6.1.1., it will be considered a proposed substitute item. **CONTRACTOR** shall submit sufficient information, as provided below, to allow the **ENGINEER** to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefore. The procedure for review by the **ENGINEER** will include the following as supplemented in the Special Provisions and as **ENGINEER** may decide is appropriate under the circumstances. Requests for review of proposed substitute items of material or equipment will not be accepted by **ENGINEER** from anyone other than **CONTRACTOR**. If **CONTRACTOR** wishes to furnish or use a substitute item of material or equipment, **CONTRACTOR** shall first make written application to the **ENGINEER** for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified and be suited to the same use as that specified. The application will state the extent, if any, to which the evaluation and acceptance of the proposed substitute will prejudice **CONTRACTOR'S** achievement of completion on time, whether or not acceptance of the substitute for use in the work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with **COUNTY** for work on the project) to adapt the design to the

proposed substitute and whether or not incorporation or use of the substitute in connection with the work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified shall be identified in the application and available maintenance, repair and replacement services shall be indicated. The application shall also contain an itemized estimate of all costs or credits that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which will be considered by the **ENGINEER** in evaluation the proposed substitute. The **ENGINEER** may require **CONTRACTOR** to furnish additional data about the proposed substitute.

6.1.3 All data provided by **CONTRACTOR** in support of any proposed "or-equal" or substitute item will be at **CONTRACTOR'S** sole expense.

7. **SUBSTITUTE CONSTRUCTION METHODS OR PROCEDURES (SUBSECTION 105.2.2)**

7.1 If a specific means, method, technique, sequence or procedure of construction is shown or indicated and expressly required by the Contract Documents, **CONTRACTOR** may furnish or utilize a substitute means, method, technique, sequence or procedure of construction acceptable to the **ENGINEER**. **CONTRACTOR** shall submit sufficient information to allow the **ENGINEER** at the **ENGINEER'S** sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The procedure for review by the **ENGINEER** will be similar to that outlined in Section 6.1.2, above.

8. **ENGINEERS EVALUATION (SUBSECTION 105.2.3)**

8.1 The **ENGINEER** will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to sections 6.1 and 7.1, above. The **ENGINEER** will be the sole judge of acceptability. No "or-equal" or substitute shall be ordered, installed or utilized without the **ENGINEER'S** prior written acceptance which will be evidenced by either a Change Order or an approved Shop Drawing. The **COUNTY** may require **CONTRACTOR** to furnish at **CONTRACTOR'S** expense a special performance guarantee or other surety with respect to any "or-equal" or substitute. The **ENGINEER** will record time required by the **ENGINEER** and the **COUNTY'S** consultants in evaluating substitutes proposed or submitted by **CONTRACTOR** pursuant to 6.1.2 and 7.1, above and in making changes in the Contract Documents occasioned thereby. Whether or not **ENGINEER** accepts a substitute item so proposed or submitted by **CONTRACTOR**, **CONTRACTOR** shall reimburse the **COUNTY** for cost incurred for the evaluation of the proposed substitute item by the **ENGINEERS** and/or **COUNTY'S** consultant.

9. **GUARANTEE AND WARRANTY PROVISIONS (SECTION 108.8)**

The first paragraph of the guarantee and warranty provisions of the MAG Standard Specifications shall be deleted in its entirety and replaced with the following paragraphs:

CONTRACTOR warrants that the work performed and materials used shall be free of defects for the period of one (1) year from the date of final acceptance of the work, excluding ordinary wear and tear or unusual abuse and neglect. Additionally, **CONTRACTOR** warrants that all corrections made under the warranty provisions of Section 108.8 of the MAG Standard Specifications shall be free of defects in workmanship or material for a period of one (1) year, commencing on the day of final acceptance of the corrections by the **ENGINEER**.

Failure by the **ENGINEER** to reject defective workmanship and/or material during construction, shall not be construed as an acceptance of said workmanship and/or material and **CONTRACTOR** shall correct such workmanship and/or material at the request of the **COUNTY** at any time prior to final acceptance of the work or for a one (1) year period thereafter.

All other provisions of Section 108.8 of the MAG Standard Specifications shall remain in full force and effect.

10. **VALUE ENGINEERING**

10.1 Purpose - This clause defines a Construction Incentive Change Order Proposal ("CICOP") and establishes the policy and procedure for the application of CICOP's in the Maricopa County construction process.

10.2 Definition - A CICOP is a defined, written proposal for a change order during construction and shall be initiated, developed and identified by **CONTRACTOR**. The CICOP shall result in gross capital savings and a net capital cost reduction, shall not increase the total maintenance cost of the project and shall meet the following requirements:

10.2.1 Any and all time extensions for the project shall be agreed upon by both parties at the time the CICOP is approved. The **COUNTY'S** determination shall be binding upon the **CONTRACTOR** and shall not be subject to challenge.

10.2.2 The CICOP shall not alter the initially intended function, quality and safety standards of the project.

10.2.3 The CICOP shall not change the overall scope of the work, which would require a re-bidding of the project.

10.2.4 The CICOP shall not conflict with any contract provisions regarding proprietary and restrictive specifications for bids in connection with MAG Standard Specifications and details, or any other applicable specifications.

- 10.2.5 The CICOP shall not cause undue interruption of the contract work schedule.
- 10.2.6 The proposed changes in connection with the CICOP shall comply with all federal, state and local regulations, mandates and permits.
- 10.2.7 **CONTRACTOR** may submit a preliminary CICOP, which shall address all components required for a final CICOP, in summary form. The **COUNTY** will review the preliminary CICOP and inform **CONTRACTOR** in writing if the **COUNTY** wishes to implement the CICOP. **CONTRACTOR** would then be instructed to prepare a detailed CICOP.

10.3 Applicability - All Maricopa County construction contracts.

10.4 Content - The CICOP shall contain pertinent information and support documentation to allow comprehensive review by the appropriate contracting agency. At a minimum, the CICOP shall include the following information:

- 10.4.1 Name and title of individuals associated with the design and preparation of the CICOP.
- 10.4.2 Detailed scope description with signed plans and specifications. A comparison summary of present design, proposed changes and detailed description of the advantages and disadvantages for each change proposed.
- 10.4.3 Comprehensive procedure and schedule outlining implementation of CICOP, including all required contract amendments and the absolute latest approval date for the CICOP.
- 10.4.4 Estimated cost summary which shall include but not necessarily be limited to the following:
 - 10.4.4.1 Project cost with and without CICOP, which shall include the following items:
 - 10.4.4.1.1 Quantities of materials and equipment.
 - 10.4.4.1.2 Unit prices for materials and equipment.
 - 10.4.4.1.3 Hourly rates and total labor hours required for installation.
 - 10.4.4.1.4 Overhead and fee percentage of **CONTRACTOR** and all subcontractors of any tier involved in the performance of the work outlined in the CICOP.
 - 10.4.4.2 Operations and maintenance cost prior to and after implementation of CICOP.

- 10.4.4.3 Implementation cost of the CICOP not covered in section 10.4.4.1, above.
 - 10.4.4.4 **CONTRACTOR'S** cost of the savings, based on the formula specified below.
 - 10.4.4.5 Other pertinent data, as may be required by the **COUNTY** to prepare and execute a change order to the Contract.
 - 10.4.4.6 If **CONTRACTOR** fails to notify the **COUNTY** of all required changes for the CICOP during the initial CICOP approval stage, **CONTRACTOR** shall absorb all costs connected with the implementation of changes of which the **COUNTY** was not made aware of. If conditions occur, which could not be foreseen by any prudent **CONTRACTOR**, the **COUNTY** may enter into negotiations with **CONTRACTOR** and make the necessary cost adjustments to the Contract.
 - 10.4.4.7 All CICOP'S become public record when submitted to the **COUNTY** for review and approval. Propriety information may be protected by **CONTRACTOR**.
 - 10.4.4.8 For CICOP'S accepted by the **COUNTY**, processing procedure for change orders shall be used.
 - 10.4.4.9 If a CICOP is rejected by the **COUNTY**, **CONTRACTOR** may not appeal such a rejection.
- 10.5 Sharing Provisions - Upon acceptance and implementation of a CICOP, **CONTRACTOR** will share the net capital savings derived from the implementation of the CICOP, in accordance with the formula outlined below:
- 10.5.1 Initial construction cost minus revised construction cost minus CICOP development cost and CICOP implementation cost equals net capital savings.
 - 10.5.1.1 The CICOP implementation cost shall include **CONTRACTOR'S** actual cost and fee for reviewing and redesigning the CICOP, documented to the satisfaction of the **COUNTY**.
 - 10.5.1.2 CICOP development cost shall include **CONTRACTOR'S** cost directly associated with the preparation of the CICOP package, documented to the satisfaction of the **COUNTY**.

10.5.2 Sharing Formula - Cumulative Net Capital Savings, calculated in accordance with the formula outlined in Section 10.5.1, above, shall be shared with **CONTRACTOR** on an equal 50/50 percentage basis.

11. **NON-DISCRIMINATION**

CONTRACTOR, in connection with any activity under this Contract, shall not discriminate against any person on the grounds of race, color, religion, sex, national origin, age, disability, political affiliation or belief. **CONTRACTOR** shall include a clause to this effect in all subcontracts. **CONTRACTOR** shall also comply with all applicable provisions of the Americans with Disabilities Act of 1990.

(END OF SECTION)

PROPOSAL

TO THE BOARD OF SUPERVISORS
MARICOPA COUNTY
PHOENIX, ARIZONA

Gentlemen:

The following Proposal is made for constructing Work Order No. 68237, Broadway Road, 43rd Avenue to 35th Avenue in the County of Maricopa, State of Arizona.

The following Proposal is made on behalf of

and no others. Evidence of authority to submit the Proposal is herewith furnished. The Proposal is in all respects fair and is made without collusion on the part of any person, firm, or corporation mentioned above, and no member or employee of the Board of Supervisors is personally or financially interested, directly or indirectly, in the Proposal, or in any purchase or sale of any materials or supplies for the work to which it relates, or in any portion of the profits thereof.

The Undersigned certifies that the approved Plans, Construction Specifications, Forms of Contract, Bonds, and Sureties authorized by the Board of Supervisors and constituting essential parts of this Proposal, have been carefully examined and also that the site of the work has been personally inspected.

The Undersigned declares that the amount and nature of the work to be done is understood and that at no time will misunderstanding of the Plans, Construction Specifications, Special Provisions, or conditions to be overcome, be pled. On the basis of the Plans, Construction Specifications, Special Provisions, the Forms of Contract, Bonds, and Sureties proposed for use, the Undersigned proposes to furnish all the necessary machinery, equipment, tools, apparatus, and other means of construction, to do all the work and to furnish all the materials in the manner specified and to finish the entire project within the time hereinafter proposed and to accept, as full compensation therefore, the sum of various products obtained by multiplying each unit price, herein bid for the work or materials, by the quantity thereof actually incorporated in the complete project, as determined by the Engineer.

The Undersigned understands that the quantities mentioned herein are approximate only and are subject to increase or decrease and hereby proposes to perform all quantities of work, as either increased or decreased, in accordance with the provisions of the Specifications, at the unit price bid in the Bidding Schedule.

The Undersigned further proposes to perform all extra work that may be required on the basis provided in the Specifications and to give such work personal attention and to secure economical performance.

The Undersigned further proposes to execute the Contract Agreement and furnish satisfactory Bonds and Sureties within ten (10) days of receipt of Notice of Proposal acceptance, **TIME BEING OF THE ESSENCE**. The Undersigned further proposes to begin work as specified in the Contract attached hereto, and to complete the work within **(165) calendar days** from the effective date specified in the Notice to Proceed, and maintain at all times a Payment and Performance Bond, approved by the Board of Supervisors, each in an amount equal to one hundred percent of the contract amount. This Bond shall serve not only to guarantee the completion of the work on the part of the Undersigned, but also to guarantee the excellence of both workmanship and material and the payment of all obligations incurred, said Bonds and Sureties to be in full force and effect until the work is finally accepted and the provisions of the Plans, Construction Specifications, and Special Provisions fulfilled.

A Proposal Guaranty in the amount and character named in the Invitation to Bid is enclosed amounting to not less than **ten (10) percent** of the total bid. The Proposal Guaranty is submitted as a guaranty of the good faith of the Bidder and the Bidder will enter into written contract, as provided, to do the work, if successful in securing the award thereof; and it is hereby agreed that if at any time other than as provided in the Proposal requirements and conditions the Undersigned should withdraw its Proposal, if the Proposal is accepted and there should be failure on the part of the Undersigned to execute the Contract and furnish satisfactory Bonds and Sureties as herein provided, the County of Maricopa in either of such events, shall be entitled and is hereby given the right to retain the said Proposal Guaranty as liquidated damages.

The Undersigned acknowledges receipt of the following addenda, had attached these to the bid package, and has included their provisions in the proposal:

Addendum No. _____ Dated _____

The Undersigned has enclosed the required bid security to this Proposal.

BIDDING SCHEDULE

8/25/94

'BROADWAY ROAD, 43 RD AVENUE TO 35 TH AVENUE, MCDOT WORK ORDER # 68237

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
107.01100	NPDES	1	L.S.		
107.15000	Community Relations (Allowance)	1	Allowance	\$25,000.00	\$25,000.00
110.01000	Mobilization	1	L.S.		
205.00000	Roadway Excavation (Unsuitable Material)	6400	C.Y.		
220.42410	Riprap with Fabric	550	S.Y.		
225.09000	Watering	2525	1000 GAL		
301.02000	Subgrade Preparation	50221	S.Y.		
310.07100	Aggregate Base	25427	TON		
315.07000	Bituminous Prime Coat , (Contingent Item)	65	TON		
321.02100	Asphalt Concrete Pavement (C-3/4)(2-1/2 ")	6878	TON		
321.02240	Paved Detour	4500	S.Y.		
321.03100	Asphalt Concrete Pavement (D-1/2)(1-1/2 ")	4129	TON		
329.07000	Bituminous Tack Coat , (Diluted)(Contingent Item)	21	TON		
333.00100	Fog Seal Coat (Contingent Item)	21	TON		
333.00200	Blotter Sand (Contingent Item)	22	TON		
340.00025	Conc. Single Curb MAG Std 222, Type 'A'	1499	L.F.		
340.01125	Conc. Curb & Gutter, MAG Std 220, Type 'A', H=6	3051	L.F.		
340.09953	Concrete Driveway Entrance	4612	S.F.		
340.22945	Conc. Sidewalk Ramp, Type " A " (COP-P1233)	3	Each		
340.23959	Alley Entrance (COP Std P1255)	340	S.F.		
345.01100	Adjust WV Frame and Cover, MAG Std 391-1 (Type A)	17	Each		

BIDDING SCHEDULE

8/25/94

'BROADWAY ROAD, 43 RD AVENUE TO 35 TH AVENUE, MCDOT WORK ORDER # 68237

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
345.01101	Adjust WV Frame and Cover, MAG Std 391-1 (Type B)	1	Each		
345.03400	Adjust Sewer Manhole Cover	8	Each		
345.06100	Adjust Water Meter Box and Cover	3	Each		
350.01100	Removal Of Existing Improvements	1	L.S.		
350.08000	Removal Of Concrete Curb And Gutter	360	L.F.		
350.08001	Removal Of Concrete Pipe	121	L.F.		
350.08003	Removal Of Block Fence	140	L.F.		
350.08004	Removal Of Guardrail	173	L.F.		
401.00000	Traffic Control	1	L.S.		
401.01100	Uniformed Off Duty Officers	250	HR.	\$21.00	\$5,250.00
401.04000	Temporary Concrete Barrier	800	L.F.		
401.99000	Temporary Traffic Signal	1	L.S.		
402.01110	1" PVC Schedule 40 (For Signals)	1450	L.F.		
402.01210	2" PVC Schedule 40 (For Signals)	550	L.F.		
402.01310	3" PVC Conduit, Schedule 40 For Future Irrigation	156	L.F.		
402.01311	3" PVC Schedule 40 (For Signals)	347	L.F.		
402.41210	2 1/2" PVC Schedule 40 Conduit (For Lighting)	1244	L.F.		
403.01500	No. 5 Pullbox (MAG Detail)	4	Each		
403.21300	No. 3 1/2 Pullbox (City of Phoenix Detail)	18	Each		

BIDDING SCHEDULE

8/25/94

'BROADWAY ROAD, 43 RD AVENUE TO 35 TH AVENUE, MCDOT WORK ORDER # 68237

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
403.21500	No. 5 Pullbox (City of Phoenix Detail)	4	Each		
403.41500	No. 5 Pullbox (SRP Dimensions)	6	Each		
404.20101	Type "A" Pole Foundation	4	Each		
404.20701	Type "M" Pole Foundation	4	Each		
405.00010	Survey Monument, MAG Std 120-2, Type D	3	Each		
405.01010	Survey Monument, MAG Std 120-2, Type E	1	Each		
420.00600	6' Chain Link Fence (MAG 160)	626	L.F.		
450.01114	White Pavement Marking Paint (4' Line)	14083	L.F.		
450.01214	Yellow Pavement Marking Paint (4' Line)	20866	L.F.		
450.02000	Arrows	4	Each		
450.02020	Raised Pavement Markers Type "A" (Nonreflective)	95	Each		
450.02021	Raised Pavement Markers Type "AY" (Nonreflective)	36	Each		
505.06113	Catch Basin Type "F" (MAG 535) with AC Apron (ADOT C-15.80)	6	Each		
505.06200	Concrete Scupper (MAG 206.1, 206.2)	2	Each		
505.06700	Concrete Pipe Encasement (MAG 507)	1	Each		
505.06900	Conc Pipe Collar, 24" DIA and Under (MAG Std -505)	4	Each		
505.26110	Catch Basin Type "N" (COP P1570) w/ AC Apron (ADOT C-15.80)	1	Each		
505.26111	Catch Basin Type "M" L=6' V=3' (COP P1569-1)	3	Each		
505.26112	Catch Basin Type "M" L=6' V=3.5' (COP P1569-1)	5	Each		
505.26113	Catch Basin Type "M" L=6' V=4' (COP P1569-1)	4	Each		
610.01001	6" Cast Iron Pipe	16	L.F.		

BIDDING SCHEDULE

8/25/94

'BROADWAY ROAD, 43 RD AVENUE TO 35 TH AVENUE, MCDOT WORK ORDER # 68237

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
610.21400	1" Water Service	1	Each		
610.21403	12" Diam. Asbestos Cement Pipe	526	L.F.		
610.04310	Relocate Water Meter	1	Each		
610.04600	Install New Fire Hydrant	1	Each		
610.04610	Relocate Fire Hydrant	2	Each		
615.00006	6" Pipe Plug (MAG 427)	1	Each		
615.00008	8" Stubout & Plug (MAG 427)	1	Each		
615.28506	6" VCP	81	L.F.		
615.28508	8" VCP	269	L.F.		
618.00718	18" Stubout & Plug (MAG 427)	1	Each		
618.00724	24" Stubout & Plug (MAG 427)	2	Each		
618.02318	18" R G R C P, Class III	753	L.F.		
618.02324	24" R G R C P, Class III	1765	L.F.		
618.02330	30" R G R C P, Class III	274	L.F.		
618.02336	36" R G R C P, Class III	1327	L.F.		
618.02342	42" R G R C P, Class III	84	L.F.		
618.02348	48" R G R C P, Class III	208	L.F.		

BIDDING SCHEDULE

8/25/94

'BROADWAY ROAD, 43 RD AVENUE TO 35 TH AVENUE, MCDOT WORK ORDER # 68237

Work Order No. 68237

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
623.01124	Conc Headwall (1-24") (MAG Std-501-1,2, Modified, U Type)	1	Each		
623.01142	Conc Headwall (1-42") (MAG Std-501-1,2, Modified, U Type)	1	Each		
623.01230	Conc Headwall (1-30")(MAG Std-501-1,2, U Type)	1	Each		
623.01348	Conc Headwall (1-48")(MAG Std -501-1,2, Modified, L Type)	1	Each		
623.11542	Access Barrier (COP P1563,ADOT C-13.80)H=42"W=32"(DbI Hinge)	1	Each		
623.11548	Access Barrier (COP P1563,ADOT C-13.80)H=92"W=32"(DbI Hinge)	1	Each		
623.11594	Access Barrier (COP P1563,ADOT C-13.80)H=86"W=32"(DbI Hinge)	1	Each		
623.11596	Access Barrier (COP P1563,ADOT C-13.80)H=98"W=32"(DbI Hinge)	2	Each		
623.41024	NeenahType SF 24" Automatic Drainage Gate W/Cast Iron Cover	1	Each		
623.41030	NeenahType SF 30" Automatic Drainage Gate W/Cast Iron Cover	1	Each		
623.41048	NeenahType SF 48" Automatic Drainage Gate W/Cast Iron Cover	1	Each		
624.00012	12" Irrigation Valve Installation with Concrete Scouring Basin	3	Each		
625.01000	48 " Storm Drain M.H. (MAG Std - 522 Shaft COP 1520 Base)	10	Each		
625.01001	48" Sewer Manhole (MAG 420)	2	Each		
630.00100	12" x 12" Tapping Sleeve & Valve (MAG 340)	1	Each		
630.03100	Valve, 12" and under (MAG 301)	2	Each		
631.00000	Abandon Well	1	Each		
635.00000	Ditch Lining with Welded Wire Fabric	380	S.Y.		

CONTRACTOR _____ TOTAL BID AMOUNT _____

IF BY AN INDIVIDUAL:

(NAME - TITLE)

(ADDRESS)

DATE _____
(Phone)

IF BY A FIRM OR PARTNERSHIP:

(FIRM NAME)

(FIRM ADDRESS)

BY: _____
(NAME - TITLE)

DATE _____
(Phone)

**** Name and Address of Each Member:**

** The name and post office address of each member of the firm or partnership must be shown.

IF BY A CORPORATION:

(CORPORATE NAME)

(CORPORATION ADDRESS)

BY: _____

DATE _____
(Phone)

TITLE _____

* Incorporated under the Laws of _____

Names and Addresses of Officers:

(PRESIDENT)

(ADDRESS)

(SECRETARY)

(ADDRESS)

(TREASURER)

(ADDRESS)

* The name of the State under which the laws of the Corporation was chartered and names, title, and business address of the President, Secretary, and Treasurer must be shown.

SUBCONTRACTOR LISTING

The following is a listing of material suppliers and/or subcontractors which will be used by **CONTRACTOR** in the event the undersigned enters into a **CONTRACT** with the **COUNTY**. No changes of the subcontractors and material suppliers named herein shall be made without the prior written approval of the **COUNTY**.

(Signature) _____

SURETY BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, _____, as Principal, (hereinafter called the Principal), and the _____, a corporation duly organized under the laws of the State of _____, as Surety, (hereinafter called the Surety), are held and firmly bound unto Maricopa County (hereinafter called the Obligee), in the sum of **ten percent (10%)** of the total amount of the bid of Principal, submitted by him to the Obligee, for the work described below, for the payment of which sum, well and truly to be made, the said Principal and the said Surety, bind themselves, their heirs, executors, and administrators, successors and assigns, jointly and severally, firmly by these presents, and in conformance with the Arizona Revised Statutes.

WHEREAS, the said Principal is herewith submitting its proposal for **Work Order No. 68237, Broadway Road, 43rd Avenue to 35th Avenue**.

NOW, THEREFORE, if the Obligee shall accept the proposal of the Principal and the Principal shall enter into a contract with the Obligee in accordance with the terms of the proposal and give the Bonds and Certificates of Insurance as specified in the Standard Specifications with good and sufficient Surety for the faithful performance of the contract and for the prompt payment of labor and material furnished in the prosecution of the contract, or in the event of the failure of the Principal to enter into the contract and give such Bonds and Certificates of Insurance, if the Principal pays to the Obligee the difference not to exceed the penalty of the bond between the amount specified in the proposal and such larger amount for which the Obligee may in good faith contract with another party to perform the work covered by the proposal then this obligation is void. Otherwise it remains in full force and effect, provided however, that this bond is executed pursuant to the provisions of Section 34-201, Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance with the provisions of the section to the extent as if it were copied at length herein.

Signed and sealed this _____ day of _____, A.D., 19__.

Agent of Record, State of Arizona

Principal Seal

Agent Address

By: _____

Surety Seal

Bond Number

By: _____

Power of Attorney Seal

By: _____

VERIFICATION OF LICENSE

Pursuant to A.R.S. Sec. 32-1169, I hereby state that I hold a current contractor's license, duly issued by the office of the Registrar of Contractors for the State of Arizona, said license has not been revoked, that the license number, classification, and expiration date is: _____; that my privilege license number (as required by A.R.S. Sec. 42-1305) is: _____; and that, if any exemption to the above licensing requirements is claimed;

(1) The basis for the claimed exemption is: _____
_____ and;

(2) The names(s) and license number(s) of any general, mechanical, electrical, or plumbing contractor(s) to be employed on the work are:

IT IS UNDERSTOOD THAT THE FILING OF AN APPLICATION CONTAINING FALSE OR INCORRECT INFORMATION CONCERNING AN APPLICANT'S CONTRACTOR'S LICENSE OR PRIVILEGE LICENSE WITH THE INTENT TO VOID SUCH LICENSING REQUIREMENTS IS UNSWORN FALSIFICATION PUNISHABLE ACCORDING TO A.R.S. SEC. 13-2704.

DATE: _____

SIGNATURE OF LICENSEE: _____

COMPANY: _____

**MINORITY AND WOMEN-OWNED BUSINESS ENTERPRISE PROGRAM
CONTRACTING REQUIREMENTS**

- A.** The following conditions will apply in the calculation of the percentage attainment:
1. All MBE/WBE firms used in attainment of the goal must be certified with the Maricopa County Minority Business Office (MBO). The MBO is located at 2901 West Durango, Phoenix, Arizona 85009, telephone 506-4068. In addition, only those firms certified at least five (5) calendar days prior to the bid opening will be considered in the attainment of the goal.
 2. Prime contractor subcontracts to MBE or WBE:
The MBE/WBE amount to be applied to the goal will be based on that portion (dollar value) of the contract that the MBE/WBE performs. For example, if a prime contractor subcontracts work amounting to \$100,000 of a contract for which the total project cost is \$1,000,000. the MBE/WBE participation will be credited as 10 percent.
 3. Prime Minority Contractor:
An MBE/WBE prime contractor will be credited with the MBE/WBE participation for that portion of the contract which they themselves perform plus that portions subcontracted to other MBE/WBE firms. For example, if an MBE/WBE prime contractor proposes to perform 50 percent of a project quoted at \$1,000,000 and subcontracts 25 percent to an MBE firm and 25 percent to a non-MBE/WBE firm, MBE/WBE participation will be credited as 75 Percent, or \$750,000.
 4. Minority-Non-Minority Joint Venture:
A joint venture consisting of MBE/WBE participation and non-MBE/WBE business enterprises, functioning as a prime contractor, will be credited with minority participation on the basis of the percentage of profit accruing to the MBE/WBE firm. For example, if a MBE/WBE and non-MBE/WBE joint venture proposes to perform 50 percent of a \$1,000,000 project and 50 percent of the joint venture profits (\$500,000) are to accrue to the MBE/WBE partner in the joint venture, MBE/WBE participation will be credited at 25 percent or \$250,000.
 5. Lower Tier Non-MBE/WBE Participation:
MBE/WBE subcontractors proposing to further subcontract to non-MBE/WBE contractors shall not have that portion of subcontracting activity considered when determining the percentage of MBE/WBE participation.
 6. MBE/WBE Suppliers:
Any MBE/WBE supplier that manufactures or substantially alters the material or product it supplies will have that portion of activity considered when determining the percentage of MBE/WBE participation.
 7. MBE/WBE Trucking:
Credit for trucking by MBEs or WBEs will be the amount to be paid when the MBE or WBE trucker will perform the trucking with his/her trucks, tractors, and employees or when a MBE or WBE trucking broker has signed agreements with MBE and WBE truckers.

B. Required forms:

Two Affidavits are included as part of this section. The first form, the "**MBE/WBE Assurances Affidavit**", must be completed and submitted with the bid. **FAILURE TO DO SO SHALL BE CAUSE FOR REJECTION OF THE BID.**

A SAMPLE of the second affidavit, the "**Actual MBE/WBE Participation Affidavit**", is provided for information purposes. This form with actual information must be returned by the first and second low bidders by 4:00 p.m. on the seventh calendar day after bid opening. The Affidavit will list the MBE/WBE participation by MBE/WBE firm name and the related dollar value of the MBE/WBE contract. The information in this Affidavit is binding on the contractor, to the extent that any amounts may be increased and not decreased, and that if any listed MBE/WBE's are unable to enter into a subcontract with contractor, the contractor must provide a written report to the Procurement Officer through the Owner's representative in accordance with instructions provided elsewhere (substitution of subcontractors or subconsultants) in this document.

C. Good Faith Efforts:

Bids which fail to meet MBE or WBE minimum goals at levels which equal or exceed established goals may be considered nonresponsive unless good faith efforts can be determined. Only MBE and WBE firms certified by Maricopa County prior to the bid opening and which will perform a commercially useful function will be counted toward meeting the participation goals. Any portion of the work that a proposed MBE or WBE firm will subcontract to other than another certified firm, regardless of tier, will not be counted toward the applicable goals.

The apparent first and second low bidder who do not fulfill the established MBE and WBE goals must demonstrate, through detailed and comprehensive documentation, that "good faith" efforts have been made to solicit, assist and utilize MBE and WBE firms to meet participation goals.

The County Minority Business Office (MBO) will assist prime contractors in identifying possible qualified and interested MBE and WBE subcontractors to meet designated MBE and WBE goals. A M/WBE directory will be made available which contractors must utilize in identifying MBE and WBE firms. It will be the responsibility of the prime contractors to obtain the MBE and WBE firms necessary to meet the MBE and WBE goals.

FAILURE TO CONTACT THE MBO FOR ASSISTANCE in complying with these goals may result in not having implemented "good faith" efforts. Contact may be in writing, by telephone, or in person. If by phone or in person, name of MBO person spoken to should be obtained and written within the "**CONTRACTOR CERTIFICATE OF GOOD FAITH**" submittal form.

FAILURE TO IMPLEMENT "GOOD FAITH" EFFORTS IN ACCORDANCE WITH THE MARICOPA COUNTY MINORITY BUSINESS ENTERPRISE PROGRAM TO THE SATISFACTION OF MARICOPA COUNTY, COULD RESULT IN THE REJECTION OF THE BID.

If information submitted by a prime contractor indicates that established MBE and WBE goals have not been met, the contractor must be required to provide sufficient documentation to demonstrate that he/she has complied with MBE and WBE requirements or good faith efforts. Good faith efforts will be determined by both quality and intensity of these efforts. Documentation provided to the Minority Business Office (MBO) must include:

1. The date bidder requested assistance in writing, in person, or by telephone from the MBO. The bidder should request assistance from the MBO office in order for a determination to be made. As Maricopa County M/WBE listings are updated frequently, bidders shall contact the MBO to ensure that they have the most recent edition.
2. Names, addresses and telephone numbers; and dates of notification of Maricopa County certified MBEs and WBEs solicited by direct mail for this project; and dates and methods used for follow up of initial solicitations to determine with certainty whether MBEs or WBEs were interested in subcontracting. (SEE NOTE)
3. Items of work for which bidder requested sub bids, or materials to be supplied by MBEs and WBEs; information furnished to interested MBEs and WBEs such as specifications and requirements of the work; plans; and any breakdown of items of work into economically feasible units to facilitate MBE and WBE participation.
4. Names of MBEs and WBEs who submitted bids for any of the work indicated above and were not accepted by the prime contractor. An explanation of why MBEs or WBEs contacted were not awarded subcontracts. If price was the reason for rejection of the bid, the price bid of rejected MBEs or WBEs and price bid of the selected subcontractor shall be submitted. Since utilization of available MBEs and WBEs is the program objective, price differences will not automatically be considered as cause for rejection of MBE and WBE bids.
5. Documentation of written notices or telephone calls to a reasonable number of M/WBEs soliciting their participation in sufficient time to allow M/WBEs to participate effectively. All M/WBEs listed on the Maricopa County Certification list which provide applicable goods and services for subject procurement/project should be contacted.

NOTE: THE ABOVE GOOD FAITH EFFORTS MUST HAVE BEEN CONDUCTED DURING THE BIDDING PERIOD AND PRIOR TO THE BID OPENING WITH SUBSTANTIAL TIME IN ORDER TO ALLOW FOR A RESPONSE FROM POTENTIAL M/WBE SUBCONTRACTORS. ORIGINAL CONTACT BY A PRIME CONTRACTOR JUST PRIOR TO OR ON THE BID OPENING WILL NOT BE CONSTRUED AS HAVING PROVIDED SUFFICIENT RESPONSE TIME FOR SUBMISSION OF SUBCONTRACT BIDS.

The following efforts can also be utilized in demonstrating "Good Faith" in soliciting M/WBE participation:

1. A description of the efforts made to assist MWBEs whose bids were rejected to be more competitive in their subcontracting bids. These efforts could include assistance in meeting bonding or insurance requirements.
2. Names and dates of advertisement of each newspaper, trade paper, and minority focus paper in which a request for M/WBE participation for this project was placed by the bidder.

Contractors are encouraged to seek M/WBEs in the same geographical area in which the work is to be performed or goods provided. If the bidder cannot meet the established foals using M/WBEs from the geographical area, the bidder should expand its search to a reasonable wider geographical area.

The MBO will make the final decision as to whether good faith efforts were met, based on the information submitted.

The MBO will determine if good faith efforts were met based on the information submitted.

D. Appeal Process for Bid Award:

If the Owner is considering award of a contract to a bidder other than the low bidder because of failure to meet MBE and WBE participation goals or good faith efforts, the low bidder will be notified and give an opportunity to protest the decision. This protest will be made in accordance with the Maricopa County Procurement Code, Article 9, MCI-905, which is incorporated by reference.

E. Contract Compliance:

Failure of any bidder, contractor or subcontractor to comply with any of the requirements of the Maricopa County Minority and Women-Owned Business Program shall be a material breach of contract. During the term of an awarded contract, the prime contractor shall:

1. Fulfill the MBE and WBE participation commitments submitted with their bid;
2. Continue to make every effort to utilize MBEs and WBEs;

3. Require that their subcontractors make every effort to utilize MBEs and WBEs;
4. Maintain records necessary for monitoring their compliance with provisions contained in the M/WBE Program.

The primary responsibility for assuring contractor's compliance with these M/WBE contract requirements after award rests with the Owner's designated representative. The Owner's designated representative should ascertain that no one other than the approved MBE or WBE contractors or subcontractors are performing the work, and that MBE and WBE subcontractor substitutes have been approved in advance. The prime contractor shall not perform any contract work items without prior approval by the Owner's designated representative.

The Owner's designated representative shall advise the Minority Business Office immediately of any circumstances where a contractor appears to be in violation of the MBE and WBE contract requirements. An investigation will be held by the MBO and a recommendation for corrective action shall be forwarded to the Owner's designated representative. Intentional noncompliance with the MBE and WBE requirements may result in withholding funds on the items already completed, in termination of the contract, and/or formal debarment from future contracts. The Maricopa County Minority Business Office (MBO) reserves the right to inspect all records of the contractor, MBEs and WBEs concerning this project.

The MBO will conduct MBE and WBE compliance reviews on a regular basis.

F. Substitution of Subcontractors:

The prime contractor shall request approval to replace an approved MBE or WBE subcontractor that is unable or unwilling to perform successfully on a contract with another MBE or WBE. This failure does not remove the contractor's responsibility for meeting the MBE and WBE participation goals on the contract. A written request for substitution must be made to the Owner's Procurement Officer, through the appropriate Owner's representative, of the Procurement Agency. The substitute MBE or WBE, obtained to perform an equal or greater dollar value of work, must be approved by the Owner's Procurement Officer, through the appropriate Owner's representative, prior to beginning of any work by the substitute MBE or WBE. The request for substitution must include, but is not limited to the following:

1. Reason for substitution.
2. Name, address, and telephone number of the approved MBE or WBE.
3. Name, address and telephone number of the MBE or WBE substitute.
4. Item, numbers, description of work and the proposed MBE and/or WBE dollar amount.
5. Good faith effort documentation if the substitute subcontractor is not an MBE or WBE.

G. Requests for Pay:

Each Request for Pay must be accompanied by a Maricopa County Minority/Women-Owned Business Enterprise Program MBE/WBE Participation Report in the form as provided in these documents.

The final pay request shall include a listing of total contract MBE/WBE participation. Line numbers and a description of actual work performed shall also be included. If, at the time of contract completion, the MBE and WBE commitments are not actually attained, the report is to provide an explanation of failure to comply. These reports shall be submitted within thirty (30) days of contract completion, prior to release of any remaining contract retention.

(END OF SECTION)

**MARICOPA COUNTY
 MINORITY/WOMEN-OWNED BUSINESS ENTERPRISE PROGRAM
 MBE/WBE ASSURANCES AFFIDAVIT
 NOTE: FAILURE TO COMPLETE AND SUBMIT THIS AFFIDAVIT WITH THE BID
 PROPOSAL
 SHALL BE CAUSE FOR REJECTION OF THE BID.**

The undersigned, fully cognizant of the Maricopa County MBE/WBE Program requirements and of the goal established, hereby certifies that in the preparation of this bid,

_____ (the entity submitting the bid)

(CHECK ONE)

_____ Will meet the **established** goal for participation by Minority/Women-Owned Business Enterprises.

_____ Will provide the necessary documentation to Minority Business Office to establish that a good faith effort was made.

The first and second low bidders will specify their MBE/WBE participation on the Actual Participation Affidavit or provide documentation of their good faith efforts not later than 4:00 p.m., the seventh calendar day following the bid opening. If participation is "None", the Affidavit will be completed and returned with "None" so stated therein, together with the documentation of bidder's good faith efforts to obtain the participation. This documentation will be reviewed by the MBO to determine whether in fact a comprehensive "good faith" effort has been implemented. The required affidavit shall be obtained by the apparent first and second low bidders from the Minority Business Office, 2901 West Durango, Phoenix, Arizona 85009, following the bid opening and verbal notification from the Procurement Officer of the Procurement Agency; a sample affidavit form for reference purposes follows.

STATE OF ARIZONA)
)ss
 COUNTY OF MARICOPA)

Subscribed and sworn to before me this _____ day of _____, 199__, by _____.

 Notary Public

CONTRACTOR CERTIFICATE OF GOOD FAITH

The intent of this certification is to document the good faith efforts implemented by the apparent low bidder in soliciting and utilizing M/WBE firms to meet the established M/WBE goals for County contracts. This certificate will assist Maricopa County in determining whether the apparent low bidder has implemented "good faith" efforts in accordance with the Maricopa County Minority Business Program. The burden of proof rests with the apparent low bidder.

(NOTE: Prior to filling out this Certificate it is important that contractors review the "Good Faith" efforts requirements located in the M/WBE section of the project specification booklet).

Failure to implement "good faith" efforts to the satisfaction of Maricopa County will result in rejection of the bid.

I, _____, do hereby acknowledge that I am the
of _____ who has been identified as the apparent low bidder on Project
No. _____.

Provide a brief summary of why the established M/WBE goal for this project has not been met.
(Attach additional sheets if necessary.)

I hereby certify that I have made comprehensive "good faith" efforts to solicit and utilize County certified M/WBEs to meet the established M/WBE goal of this project as demonstrated by my responses to the following questions:

A. IDENTIFYING SUBCONTRACT WORK ITEMS

Contractors are encouraged to select portions of work to be subcontracted in a manner which will increase the likelihood of meeting the established M/WBE contract goal. In selecting items of work to be performed, contractors will consider, where appropriate, breaking down contracts into economically feasible units to facilitate M/WBE participation. Contractors are reminded that only M/WBE's firms certified by the County can be used as participants towards meeting the project goals. A County M/WBE Certification listing will be provided to all consultants interested in submitting proposals for projects. This listing is the only authorized source from which to select M/WBEs for project participation. Current copies of this listing may be obtained by calling the Minority Business Office at (602) 506-4068.

- 1. Which portions of the contract proposal, in terms of the nature of the work were selected to be subconsulted?

B. NOTIFYING M/WBE FIRMS OF CONTRACTING OPPORTUNITIES

1. Solicitations by mail/fax must be made to all M/WBE firms identified on the M/WBE Certification Listing that perform the type of work which the contractor is proposing for subcontracting. Following this initial solicitation, at least one follow-up telephone call must be made to any of the M/WBE firms who have not responded to the initial mailing.
2. In the spaces provided below, indicate which firms received written solicitations for work items to be subcontracted. In the appropriate space, also indicate when the M/WBE firms received subsequent follow telephone solicitations. Please attach additional sheets so that all firms contacted are listed and attach photo copies of all written/fax solicitations to M/WBE firms to this documentation.

M/WBE Firm Contacted	Name	Date	Tel. No.	Date

3. Were the services of the County Minority Business Office used to assist the Contractor in the recruitment of M/WBEs or to assist in solving other problems?

Yes _____ No _____

Contact was made by _____ telephone _____ written correspondence

Date contacted _____ Staff person contacted _____

C. PROVIDING M/WBEs WITH ASSISTANCE

1. Explain any efforts undertaken to provide M/WBEs with information regarding project plans, specifications, scopes of work and requirements of the contract:

2. Describe any efforts initiated to provide special assistance to M/WBE firms interested in participating in this project:

3. Describe any efforts undertaken to assist M/WBE firms to obtain bonding, lines of credit, or insurance required by the County for this contract:

4. Was solicitation for M/WBEs advertised in local papers, ethnic periodicals, or trade journals? If YES, please list the name of the periodical and dates advertised.

D. SOLICITING QUOTES FROM M/WBE FIRMS

Contractors must solicit quotes in good faith with interested M/WBE firms. Quotes, proposals and bids from interested M/WBEs must not be rejected by bidders without sound justification based upon a thorough investigation of the capabilities of the M/WBE firms.

1. Indicate in the space provided below, which M/WBE firms submitted quotes on the contract proposal. Also provide a brief explanation of why any of these M/WBE quotes were rejected. If price was a determining factor, provide documentation showing the non-minority quotes. Please attach additional sheets if necessary.

Name of M/WBE Firm	Explanation for rejection
--------------------	---------------------------

**MARICOPA COUNTY
MINORITY/WOMEN-OWNED BUSINESS ENTERPRISES PROGRAM**

**MBE/WBE PARTICIPATION REPORT
(To be attached with Request for Pay)**

Date: _____
Contractor: _____
Contact Person: _____
Address: _____
Telephone: _____
Project: _____
Contract Number: _____
For Pay Period of: _____
Subcontractor:
Person to Contact: _____
Address: _____
Telephone Number: _____
Type of Firm: _____
Class of Work: _____
Subcontract Amount: _____
Amount Earned _____
(Commission) This Period: _____
Total Earned by This Subcontractor: _____
Total MBE/WBE Contract Goal, %: _____
Total Cumulative MBE/WBE
Participation on This Contract, %: _____
MBE/WBE subcontract payment made
during this reporting period (yes or no): _____

cc: Minority Business Office
2901 West Durango
Phoenix, Arizona 85009

**PROHIBITION OF DISCRIMINATION IN STATE CONTRACTS
NONDISCRIMINATION IN EMPLOYMENT BY GOVERNMENT
CONTRACTORS AND SUBCONTRACTORS**

During the performance of this Contract, **CONTRACTOR** agrees as follows:

- A. **CONTRACTOR** will not discriminate against any employee or applicant for employment because of race, age, color, religion, sex, disability, or national origin. **CONTRACTOR** will take affirmative action to insure that applicants are employed and that employees are treated during employment without regard to their race, age, color, religion, sex, disability, or national origin. Such action shall include but not be limited to the following: Employment, upgrading, demotion or transfer, recruitment or recruitment advertising, lay-off or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. **CONTRACTOR** agrees to post in conspicuous places available to employees and applicants for employment notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.
- B. **CONTRACTOR** will in all solicitations or advertisement for employees placed by or on behalf of the contractor state that all qualified applicants will receive consideration for employment without regard to race, age, color, religion, sex, disability, or national origin.
- C. **CONTRACTOR** will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding a notice to be provided by the agency contracting officer advising the labor union or workers' representative of **CONTRACTOR'S** commitments under this Executive Order and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- D. **CONTRACTOR** will furnish all information and reports required by the contracting agency and will permit access to his books, records and accounts by the contracting agency and the Civil Rights Division for purposes of investigation to ascertain compliance with such rules, regulations and orders.
- E. In the event of **CONTRACTOR'S** noncompliance with the nondiscrimination clauses of this Contract or with any of such rules, regulations or orders of the Arizona Civil Rights Division said noncompliance will be considered a material breach of the contract and this Contract may be canceled, terminated or suspended in whole or in part, and **CONTRACTOR** may be declared ineligible for further government contracts until said **CONTRACTOR** has been found to be in compliance with the provisions of this order and the rules and regulations of the Arizona Civil Rights Division, and such sanctions may be imposed and remedies invoked as provided in Part II of this order, and the rules and regulations of the Arizona Civil Rights Division.
- F. **CONTRACTOR** will include the provisions of paragraphs A through E in every subcontractor purchase order so that such provision will be binding upon each subcontractor or vendor. **CONTRACTOR** will take such action with respect in the

subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in the event **CONTRACTOR** becomes involved in or is threatened with litigation with a subcontractor or vendor as a result of such direction by the contracting agency, **CONTRACTOR** may request the State of Arizona to enter into such litigation to protect the interests of the State of Arizona.

- G. Each **CONTRACTOR** having a contract containing the provisions prescribed in this section shall file and shall cause each of his subcontractors to file compliance reports with the contracting agency or the Civil Rights Division, as may be directed. Compliance reports shall be filed within such times and shall contain such information as the practices, policies, programs and employment policies, programs and employment statistics of **CONTRACTOR** and each subcontractor and shall be in such form as the Arizona Civil Rights Division may prescribe.
- H. Bidders or prospective contractors or subcontractors shall be required to state whether they have participated in any previous contract subject to the provisions of this order or any preceding similar Executive Order and in that event to submit on behalf of themselves and the proposed subcontractors compliance reports prior to, or as an initial part of negotiation of a contract.
- I. Whenever **CONTRACTOR** or subcontractor has a collective bargaining agreement or other contract or understanding with a labor union or an agency referring workers or providing or supervising apprenticeship or training for such workers, the compliance report shall include such information from such labor unions or agency practices and policies affecting compliance as the contracting agency or Civil Rights Division may prescribe; provided that, to the extent such information is within the exclusive possession of a labor union or an agency referring workers or providing or supervising apprenticeship or training and such labor union or agency shall refuse to furnish such information to **CONTRACTOR**, **CONTRACTOR** shall so certify the contracting agency as part of its compliance report and shall set forth what efforts he has made to obtain such information.
- J. The contracting agency or the Civil Rights Division shall require that the bidder or prospective contractor or subcontractor shall submit as part of his compliance report a statement in writing signed by an authorized officer or agent on behalf of any labor union or any agency referring workers or providing or supervising apprenticeship or other training with which the bidder or prospective contractor deals with supporting information to the effect that the signer's practices and policies do not discriminate on the grounds of race, color, religion, sex, disability, or national origin, and that the signer either will affirmatively cooperate in the implementation of the policy and provisions of this order or that it consents and agrees that recruitment employment and the terms and conditions of employment under the proposed contract shall be in accordance with the purpose and provisions of this order. In the event that the union or the agency shall refuse to execute such a statement, the compliance shall so certify and set forth what efforts have been made to secure such a statement and such additional factual material as the contracting agency or the Civil Rights Division may require.

Part II - Enforcement

- A. Each contracting agency shall be primarily responsible for obtaining compliance with this Executive Order with respect to contracts entered into by such agency or its contractors. All contracting agencies shall comply with the rules of the Civil Rights Division in discharging their primary responsibility for securing compliance with the provisions of contracts and otherwise with the terms of this order and rules and regulations and orders of the Civil Rights Division issued pursuant to this order. They are directed to cooperate with the Civil Rights Division and to furnish the Division such information and assistance as it may require in the performance of the Division's functions under this order. They are further directed to appoint or designate from among the agency personnel compliance officers. It shall be the duty of such officers to first seek compliance with the objective of this order by conference, conciliation, mediation or persuasion.
- B. The Civil Rights Division may investigate the employment practices of any government contractor or subcontractor or initiate such investigation by appropriate contracting agency or determine whether or not the contractual provisions specified in this order have been violated. Such investigations shall be conducted in accordance with the procedures established by the Civil Rights Division and the investigating agencies shall report to the Civil Rights Division any action taken or recommended. The Civil Rights Division may receive and investigate or cause to be investigated complaints by employees or prospective employees of a government contractor or subcontractor which allege discrimination contrary to the contractual provisions specified in Part I of this order. If the investigation is conducted for the Civil Rights Division by a contracting agency, that agency shall report to the Civil Rights Division that action has been taken or is recommended with regard to such complaint.
- C. The Civil Rights Division shall use its best efforts directly and through contracting agencies, other interested state and local agencies, contractors and all other available instrumentalities to cause any labor union engaged in work under government contracts or any agency referring workers or providing or supervising apprenticeship or training for or in the course of such work to cooperate in the implementation of the purposes of this order.
- D. The Civil Rights Division or any agency, officer or employee in the executive branch of the government designated by rule, regulation or order of the Civil Rights Division may hold such hearings, public or private as the Division may deem advisable for compliance, enforcement or educational purposes. The Civil Rights Division may hold or cause to be held hearings in accordance with rules and regulations issued by the Civil Rights Division prior to imposing, ordering or recommending the imposition of penalties and sanctions under this order.
- E. No order for debarment of any contractor from further government contracts under this order shall be made without affording the contractor an opportunity for a hearing.

F. Sanctions and Penalties. In accordance with such rules, regulations or orders as the Civil Rights Division may issue or adopt, the Civil Rights Division or the appropriate contracting agency may publish or cause to be published the names of contractors or unions which it has concluded have complied or have failed to comply with the provisions of this order and with the rules, regulations and orders of the Civil Rights Division.

1. Contracts may be canceled in whole or in part, terminated, or suspended absolutely, or continuation of contracts may be conditioned upon a program for future compliance approved by the contracting agency or the Civil Rights Division; provided that any contracting agency shall refrain from entering into further contracts, extensions or other modifications of existing contracts with any noncomplying contractor until such contractor has established and will carry out personnel and employment policies in compliance with the provisions of this order.
2. Under rules and regulations prescribed by the Civil Rights Division, each contracting agency shall make reasonable efforts within a reasonable time limitation to secure compliance with the contract provisions of this order by methods of conference, conciliation, mediation and persuasion before proceedings shall be instituted under this order or before a contract shall be canceled or terminated in whole or in part under this order for failure of a contractor or subcontractor to comply with the contract provisions of this order.

CONTRACT AGREEMENT

THIS AGREEMENT, made and entered into this _____ day of _____, 19____, by and between MARICOPA COUNTY, hereinafter called the **OWNER**, acting by and through its BOARD OF SUPERVISORS, and

hereinafter called **CONTRACTOR**.

WITNESSETH: That the said **CONTRACTOR**, for and in the consideration of the sum of _____ to be paid to him by the **OWNER**, in the manner and at the times hereinafter provided, and of the other covenants and agreements herein contained, hereby agrees for himself, heirs, executors, administrators, successors, and assigns as follows:

ARTICLE I - SCOPE OF WORK: **CONTRACTOR** shall construct, and complete in a workmanlike and substantial manner and to the satisfaction of the Department of Transportation Director, a project for the Maricopa County Department of Transportation, designated as Work Order No. 68237 Broadway Road, 43rd Avenue to 35th Avenue, and furnish at its own cost and expense all necessary machinery, equipment, tools, apparatus, materials, and labor to complete the work in the most substantial and workmanlike manner according to the Plans and Specifications on file with the Maricopa County Department of Transportation, and such modifications of the same and other directions that may be made by the Maricopa County Department of Transportation as provided herein.

ARTICLE II - CONTRACT DOCUMENTS: The Contract Documents (Invitation to Bid, Administrative Requirements, Supplementary General Provisions, Plans, Construction Specifications, Addenda, if any, Maricopa County Association of Governments (MAG) Standard Specifications and Uniform Standard Details, latest revisions thereto, General Site Regulations, Proposal, Affidavits, Performance Bond, Payment Bond, Certificates of Insurance, and Change Orders, if any,) are by this reference made a part of this Contract and shall have the same effect as though all of the same were fully inserted herein.

ARTICLE III - TIME OF COMPLETION: **CONTRACTOR** further covenants and agrees at its own proper cost and expense, to do all work as aforesaid for the construction of said improvements and to completely construct the same and install the material therein, as called for by this agreement free and clear of all claims, liens, and charges whatsoever, in the manner and under the conditions specified within the time, or times, stated in the proposal pamphlet.

ARTICLE IV - PAYMENTS: For and in consideration of the satisfactory performance of the work herein embraced as set forth in the Contract Documents, which are a part hereof and in accordance with the directions of the **OWNER**, through its Engineer and to its satisfaction, the **OWNER** agrees to pay the said **CONTRACTOR** the amount earned, computed from actual quantities of work performed and accepted or materials furnished at the unit bid price on the Proposal made a part hereof, and to make such payment in accordance with the requirements of A.R.S. Sec. 34-221, as amended. **CONTRACTOR** agrees to discharge its obligations and make payments to its subcontractors and suppliers in accordance with A.R.S. Sec. 32-1129.

ARTICLE V - TERMINATION: The **OWNER** hereby gives notice that pursuant to A.R.S. Sec. 38-511(A) this contract may be canceled without penalty or further obligation within three years after execution if any person significantly involved in initiation, negotiation, securing, drafting or creating a contract on behalf of the **OWNER** is, at any time while the contract or any extension of the contract is in effect, an employer agent of any other party to the contract in any capacity or a consultant to any other party of the contract with respect to the subject matter of the contract. Cancellation under this section shall be effective when written notice from the Transportation Director of the **OWNER** is received by all of the parties to the contract. In addition, the **OWNER** may recoup any fee for commission paid or due to any person significantly involved in initiation, negotiation, securing, drafting or creating the contract on behalf of the **OWNER** from any other party to the contract arising as a result of the contract.

ARTICLE VI - NEGOTIATION CLAUSE: Recovery of damages related to expenses incurred by **CONTRACTOR** for a delay for which the **OWNER** is responsible, which is unreasonable under the circumstances and which was not within the contemplation of the parties to the contract, shall be negotiated between **CONTRACTOR** and the **OWNER**. This provision shall be construed so as to give full effect to any provision in the contract which requires notice of delays, provides for arbitration or other procedure for settlement or provides for liquidated damages.

ARTICLE VII - COMPLIANCE WITH LAWS: **CONTRACTOR** is required to comply with all Federal, State and local ordinances and regulations. **CONTRACTOR's** signature on this contract certifies compliance with the provisions of the I-9 requirements of the Immigration Reform Control Act of 1986 for all personnel that **CONTRACTOR** and any subcontractors employ to complete this project. It is understood that the **OWNER** shall conduct itself in accordance with the provisions of the Maricopa County Procurement Code.

ARTICLE VIII - MBE/WBE PROGRAM: The Maricopa County Department of Transportation will endeavor to ensure in every way possible that minority and women-owned business enterprises shall have every opportunity to participate in providing professional services, purchased goods, and contractual services to the Maricopa County Department of Transportation without being discriminated against on the grounds of race, age, color, religion, sex, disability, or national origin. The Maricopa County Minority Business Program implemented January 1, 1992, is incorporated by reference.

ARTICLE IX - ANTI-DISCRIMINATION PROVISION: **CONTRACTOR** agrees not to discriminate against any employee or applicant for employment because of race, age, color, religion, sex, disability, or national origin, and further agrees not to engage in any unlawful employment practices. **CONTRACTOR** further agrees to insert the foregoing provision in all subcontracts hereunder.

IN WITNESS WHEREOF: Five (5) identical counterparts of this Contract, each of which shall for all purposes be deemed an original thereof, have been duly executed by the parties hereinabove named, on the date and year first above written.

CONTRACTOR

BY: _____
PRINTED NAME

BY: _____
SIGNATURE

TITLE

DATE _____

TAX IDENTIFICATION NUMBER

CERTIFICATE OF INSURANCE APPROVED:

BY: _____

DATE _____

BY: _____
CHAIRMAN, BOARD OF SUPERVISORS

DATE _____

ATTEST:

BY: _____
CLERK OF THE BOARD

RECOMMENDED BY:

TRANSPORTATION PROCUREMENT OFFICER

DATE _____

LEGAL REVIEW:

Approved as to form and within the powers and authority granted under the laws of the State of Arizona to Maricopa County.

BY: _____
DEPUTY COUNTY COUNSEL

DATE _____

**STATUTORY PAYMENT BOND PURSUANT TO TITLE 34
CHAPTER 2, ARTICLE 2, OF THE ARIZONA REVISED STATUTES
(Penalty of this bond must be 100% of the Contract amount)**

KNOW ALL MEN BY THESE PRESENTS:

That, _____ (hereinafter called the Principal), As Principal, and _____ a corporation organized and existing under the laws of the State of _____, with its principal office in the City of _____ (hereinafter called the Surety), as Surety, are held and firmly bound unto Maricopa County (hereinafter called the Obligee), in the amount of dollars (\$_____), for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Obligee, dated the ___ day of _____, 1994, for **Work Order No. 68237, Broadway Road, 43rd Avenue to 35th Avenue** which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal promptly pays all monies due to all persons supplying labor or materials to the Principal or the Principal's subcontractors in the prosecution of the work provided for in the contract, this obligation is void. Otherwise it remains in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Title 34, Chapter 2, Article 2, of the Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance with the provisions, conditions and limitations of Title 34, Chapter 2, Article 2, Arizona Revised Statutes, to the same extent as if it was copied at length in this Agreement.

The prevailing party in a suit on this bond shall recover as a part of the judgement reasonable attorney's fees that may be fixed by the court or a judge thereof.

Witness our hands this ___ day of _____, 1994.

PRINCIPAL SEAL

AGENT OF RECORD, STATE OF AZ

BY: _____

AGENT ADDRESS

SURETY SEAL

BOND NUMBER: _____

BY: _____

**STATUTORY PERFORMANCE BOND PURSUANT TO TITLE 34
CHAPTER 2, ARTICLE 2, OF THE ARIZONA REVISED STATUTES
(Penalty of this bond must be 100% of the Contract amount)**

KNOW ALL MEN BY THESE PRESENTS:

That, _____ (hereinafter called the Principal), as Principal, and _____ a corporation organized and existing under the laws of the State of _____, with its principal office in the City of _____ (hereinafter called the Surety), as Surety, are held and firmly bound unto Maricopa County, (hereinafter called the Obligee) in the amount of dollars (\$ _____), for the payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with Obligee, dated the ___ day of _____, 1994, for **Work Order No. 68237, Broadway Road, 43rd Avenue to 35th Avenue**, which contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully perform and fulfill all the undertakings, covenants, terms, conditions and agreements of said contract during the original term of said contract and any extension thereof, with or without notice to the Surety, and during the life of any guaranty required under the contract, and shall also perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the Surety being hereby waived; then the above obligation shall be void, otherwise to remain in full force and effect;

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Title 34, Chapter 2, Article 2, of the Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance with the provisions of said Title, Chapter, and Article, to the extent as if it was copied at length herein.

The prevailing party in a suit on this bond shall be entitled to such reasonable attorney's fees as may be fixed by a judge of the court.

Witness our hands this ___ day of _____, 1994.

PRINCIPAL SEAL

BY: _____

AGENT OF RECORD, STATE OF AZ

AGENT ADDRESS

SURETY SEAL

BOND NUMBER: _____

BY: _____



MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION

CERTIFICATE OF INSURANCE

NAME AND ADDRESS OF INSURANCE AGENCY	INSURANCE COMPANIES AFFORDING COVERAGES
	Company A Letter
	Company B Letter
NAME AND ADDRESS OF INSURED	Company C Letter
	Company D Letter
	Company E Letter
	Company F Letter
	Company G Letter

THIS IS TO CERTIFY THAT POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE AND ARE IN FORCE AT THIS TIME.

COMPANY LETTER	TYPE OF INSURANCE	POLICY NUMBER	EXPIRATION DATE	LIMITS OF LIABILITY IN \$1,000 MINIMUM each occurrence	
	COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> LIABILITY FORM <input type="checkbox"/> PREMISES OPERATIONS <input type="checkbox"/> CONTRACTUAL <input type="checkbox"/> BROAD FORM PROPERTY DAMAGE <input type="checkbox"/> EXPLOSION & COLLAPSE <input type="checkbox"/> PRODUCTS/COMPLETED OPERATIONS HAZARD <input type="checkbox"/> UNDERGROUND HAZARD <input type="checkbox"/> INDEPENDENT CONTRACTORS <input type="checkbox"/> PERSONAL INJURY			BODILY INJURY per person \$1,000 each occurrence \$5,000 PROPERTY DAMAGE or BODILY INJURY & PROPERTY DAMAGE COMBINED \$1,000 \$5,000	
	COMPREHENSIVE AUTO <input type="checkbox"/> LIABILITY & NON-OWNED			SAME AS ABOVE	
	<input type="checkbox"/> EXCESS LIABILITY			NECESSARY IF UNDERLYING NOT ABOVE MINIMUM	
	<input type="checkbox"/> WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY			STATUTORY LIMIT each accident	
	<input type="checkbox"/> ENGINEERS PROFESSIONAL LIABILITY			EACH CLAIM AND ANNUAL AGGREGATE	
	<input type="checkbox"/> OTHER				

Except for Professional Liability Insurance and Workers' Compensation Insurance, the Maricopa County Department of Transportation (MCDOT) is added as an additional insured in respect to liability arising in any manner out of the performance of any contract entered into between the insured and MCDOT or liability arising out of any services provided or duty performed by any party as required by statute, law, purchase order, or otherwise required, with the exception of liability for loss or damage resulting from the sole negligence of the Maricopa County Department of Transportation, its agents, employees, or indemnitees. It is agreed that any insurance available to the named insured shall be primary of other sources that may be available. It is further agreed that no policy shall expire, be cancelled, or materially changed to effect the coverage available to the Maricopa County Department of Transportation without thirty (30) days written notice to MCDOT. THIS CERTIFICATE IS NOT VALID UNLESS COUNTERSIGNED BY AN AUTHORIZED REPRESENTATIVE OF THE INSURANCE COMPANY.

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION 2901 West Durango Street Phoenix, Arizona 85009	DATE ISSUED _____
	_____ AUTHORIZED REPRESENTATIVE

It is further agreed that:

The Contractor hereby agrees to indemnify and save harmless Maricopa County, or any of its departments, agencies, officers or employees, from and against all loss, expense, damage or claim of any nature whatsoever which is caused by any activity, condition or event arising out of the performance or nonperformance of any of the provisions of this Agreement. Maricopa County shall in all instances be indemnified against all liability, losses and damages of any nature for or on account of any injuries to or death of persons or damages to or destruction of property arising out of or in any way connected with the performance or nonperformance of this Agreement, except such injury or damage as shall have been occasioned by the negligence of Maricopa County. The above cost of damages incurred by Maricopa County or any of their departments, agencies, officers or employees, or others aforesaid shall include in the event of an action, court costs, expenses for litigation and reasonable attorney's fees.

Firm

Date

Principal

Title

**CONSTRUCTION SPECIFICATIONS
MARICOPA COUNTY PROJECT
FOR
BROADWAY ROAD
From
43RD AVENUE TO 35TH AVENUE
WORK ORDER NO. 68237**

LOCATION OF THE WORK: This project is located on Broadway Road immediately south of the Salt River, from 43rd Avenue to 35th Avenue in the Phoenix metropolitan area.

PROPOSED WORK: The work consists of grading, draining, paving, storm drain construction, waterline and sewer line installation, intersection signalization and other miscellaneous items of work required for the completion of the project.

CONTRACT TIME: CONTRACTOR shall complete all work on the project within one hundred sixty five (165) calendar days after the Notice to Proceed has been issued.

SECTION 105.6 - COOPERATION WITH UTILITIES:

Utility Contacts:

City of Phoenix

Utility Coordinator - Mr. Pat Griffin	262-4969
Water Design & Const - Mr. Gerald Arakaki	261-8229
Wastewater Design & Const - Mr. K.N. Jaganath	262-4961
Utility Inspection (pavement cuts, electric conduit, etc.) - Mr. Larry Ely	495-2041
Traffic Control - Mr. Gary Southers	262-4690
Traffic Signals - Mr. Bill Bain	262-4690
US West Communications - Mr. Curt Sayer	831-4777
Southwest Gas - Ms Mary Bartholomew	484-5306
Salt River Project - Line Engineering - Mr. Dee Strubhar	236-4849
Salt River Project - Southside Water Service Center - Ms.Cathy Purvis	236-2780
Mr. Mike Smith	(mobil).809-1403
Dimension Cable - Mr. Carl Mckay.352-5862 ex 155
Location Staking (APS, Mtn. Bell, SRP) Blue Stake	263-1100
Maricopa Department of Transportation Utility Coordinator -Wayne Butch	506-8603
Traffic Control- K.C.Bone	506-4625

SECTION 105.8 - MARICOPA COUNTY STANDARDS FOR CONSTRUCTION STAKING: Maricopa County will furnish the necessary survey control for **CONTRACTOR'S** guidance. Staking shall consist of the following:

- a. Right-of-way lines at 100-foot intervals on even stations for clearing, fencing, and control of **CONTRACTOR'S** operations.
- b. Slope stakes will be offset from the edge of the pavement at 100-foot intervals.
- c. Blue tops in subgrade at centerline and edge of pavement at 100-foot intervals except on curves where the interval will be 50- feet or shorter.
- d. Blue tops in aggregate base course at centerline, edge of pavement, and 1/4 points at 50-foot intervals. **CONTRACTOR** shall have all his material in place and compacted within 0.2 feet \pm before the survey crew is called upon.
- e. Catch basins stakes will be offset at 10-feet and 15-feet to the center of the structure with cuts or fills shown to the top of grade.
- f. Grade and line stakes for all structures, pipe lines, culverts, and ditches at a location and offset agreed upon.
- g. Straddle points for permanent monuments.

SECTION 107.15 COMMUNITY RELATIONS: CONTRACTOR shall provide a community relations program for this project. This shall include, but not necessarily be limited to:

- a. Printing and distribution of public notices.
- b. Providing media news releases after review by the Engineer.
- c. Providing telephone "Hot Line" 24-hour service.
- d. Attending other public meetings as required by the Engineer.
- e. Documenting existing property conditions prior to starting construction.
- f. Preparing, mailing and tabulating the results of a final evaluation questionnaire.
- g. Planning or otherwise participating in Dedication Ceremonies, as requested by the Engineer.

CONTRACTOR shall use these or other means to inform the local citizens of necessary operations which create high noise levels, street closures, detour locations, haul routes and material delivery routes, hours of construction, and disruption of bus routes and other delivery/pick-up routes.

CONTRACTOR shall conduct a public pre-construction meeting at a location convenient to residents and business operators affected by the project. Time, location, agenda and notification procedure shall be approved by the Engineer. This meeting shall be conducted after execution of contract documents and prior to the start of construction. The meeting may be conducted prior to the Notice-to-Proceed and shall not be included in the contract time.

CONTRACTOR shall provide and install advance information signs and project signs before beginning construction to inform the public of the forthcoming project, construction dates, and suggested alternate routes. Signs shall not be constructed or installed prior to approval by the Engineer of their designs, sizes and proposed locations. **CONTRACTOR** shall maintain the signs as necessary and update the information as requested by the Engineer.

CONTRACTOR shall furnish a private telephone line the sole use of receiving incoming calls from local citizens with questions or complaints concerning construction operations of procedures.

CONTRACTOR shall publish the Hotline phone number and maintain a 24 hour answering service. **CONTRACTOR** shall maintain a log of incoming calls, responses, and action taken, which shall be submitted to the Engineer weekly or at the request of the Engineer.

CONTRACTOR shall document existing property conditions prior to construction. Documentation shall be either 35mm photographs or video recorded tape. One (1) copy of the documentation package shall be provided to the Engineer within ten (10) calendar days of the Notice to Proceed date.

Disruption to utilities in service shall be avoided or minimized and safety shall be maintained at all times.

Prior to the start of the project, **CONTRACTOR** shall notify, all businesses and residents within the limits of this project in writing. The notification shall contain the following information:

- a. **CONTRACTOR'S** name and phone number (day and night)
- b. Name of **CONTRACTOR'S** Project Manager
- c. Name of **CONTRACTOR'S** Project Superintendent
- d. Brief Description of Project
- e. Construction Schedule, including anticipated work hours
- f. Lane restrictions

CONTRACTOR shall furnish the Engineer a copy of the notification, along with a list of businesses and residents to whom it was sent.

CONTRACTOR shall attend public meetings deemed necessary by the Engineer.

The **COUNTY** will pay, based upon approved time and material invoices, an amount not to exceed \$25,000, shown in the Bidding Schedule under **COMMUNITY RELATIONS**, for work performed in notifying and coordinating with the local population impacted by the project.

Work which is eligible for reimbursement includes: pre-construction meeting(s), weekly progress reports, and construction meetings with impacted businesses, residents, schools, churches, and other parties; bi-weekly newsletters (plus others when necessary); project information sign and temporary signs for local access; copies of documentation of existing conditions provided to the Engineer; and maintaining of a 24 hour telephone "hot line" for complaints. **CONTRACTOR** shall coordinate with the **COUNTY** to determine who shall be notified of meetings.

No Payment will be made under this item for any calendar day during which there are substantial deficiencies in compliance, as determined by the Engineer.

CONTRACTOR shall submit a Public Information and Notification Plan in such a manner that the public pre-construction meeting shall be held prior to start of construction. No Payments shall be made to **CONTRACTOR** for this item until the Engineer approves the plan.

Prior to the completion of the project, a final evaluation questionnaire approved by the Engineer and containing return postage shall be distributed in a newsletter issue.

CONTRACTOR shall submit a final report/evaluation of the public information and notification plan process performed for this project. The report shall be submitted before **CONTRACTOR** receives final payment.

Payment for Community Relations, provided as in Section 107.15 will be made at the contract allowance specified in this section.

107.2.1 - NPDES CONSTRUCTION PERMIT REQUIREMENTS: This project is subject to the National Pollutant Discharge Elimination System (NPDES) Stormwater requirements for construction sites under the Environmental Protection Agency (EPA) General Permit for Arizona.

Payment for compliance with NPDES requirements will be paid at the contract lump sum price.

107.2.2 - CONSTRUCTION PERMITS: **CONTRACTOR** shall obtain all the necessary permits from the City of Phoenix for work within the City of Phoenix's right of way.

Permits shall be posted at the job-site office.

SECTION 110 - MOBILIZATION/DEMobilIZATION: The **COUNTY** shall compensate **CONTRACTOR** for one-time, round trip mobilization/demobilization of **CONTRACTOR'S** personnel, equipment, supplies and incidentals, establishment of offices, buildings and other facilities required for the performance of the work on the project, as well as preparatory work and operations prior to the commencement of the work on the project site.

Mobilization will be measured for Payment by the lump sum as a single complete unit of work.

Payment for mobilization, measured as provided above, will be made at the contract lump sum price. Payment shall be made in equal one-third portions. The first payment shall be paid with **CONTRACTOR'S** initial billing. The second payment shall be made when the total payments to **CONTRACTOR** for the bid items exclusive of Payments for Mobilization/Demobilization equals one-half of the total bid by **CONTRACTOR**, exclusive of Mobilization/Demobilization. The remaining one-third shall be paid as part of the final payment to **CONTRACTOR**.

When other contract items are adjusted as provided in Section 109, and if the costs applicable to such items of work include mobilization costs, such mobilization costs will be considered as recovered by **CONTRACTOR** in the lump sum price paid for mobilization, and will be excluded from consideration in determining compensation under Section 109.

If **CONTRACTOR** performs a second mobilization/demobilization of personnel, material and/or equipment at the Engineer's express written request, the **COUNTY** shall compensate **CONTRACTOR** for such expenses at **CONTRACTOR'S** actual costs. **CONTRACTOR** shall provide all documentation for these costs at the request of the Engineer.

SECTION 205 ROADWAY EXCAVATION:

205.2 UNSUITABLE MATERIAL - REMOVAL OF UNSUITABLE MATERIAL: The Geotechnical Engineering Report on the proposed improvements to Broadway Road from 51st Avenue to 35th Avenue indicates that considerable dumping has occurred along the alignment. It also indicates that the site is covered with fill at various locations consisting of two to four feet deep of soil and construction rubble. The report also indicates the past land uses of the Broadway Properties parcel, located along the north edge of the proposed alignment near 35th Avenue and along the West edge of 35th Avenue, as being part of a sand and gravel mining operation. The pits were reportedly backfilled with uncontrolled fill, possibly including construction rubble. On the Shumway parcel some surface petroleum stains were observed.

Because of such problems, sheet 40 of the plans indicates areas for removal. In addition, the prepared subgrade should be observed by **CONTRACTOR** to verify the quality of Bearing Soils. When unsuitable material is found and only when requested by the Engineer, **CONTRACTOR** shall remove the unsuitable material, and fill and compact in accordance with Section 211 of the Uniform Standard Specifications.

This work shall be performed in accordance with the plans or when requested by the Engineer. Payment will be made for work performed at the unit bid price for Item No. 205, Roadway Excavation (UNSUITABLE MATERIAL). No direct payment will be made for replacement of this material.

SECTION 206 - STRUCTURE EXCAVATION AND BACKFILL: Structure backfill consists of furnishing, placing and compacting select material and other backfill material for concrete structures and other items in accordance with the plans and Section 206 of the Uniform Standard Specifications.

Select Material shall conform to the requirements of Section 702 of the Uniform Standard Specifications.

No separate Payment will be made for structure excavation and backfill and the cost thereof shall be included in the bid price for the items to which they are appurtenant.

SECTION 220 - RIPRAP CONSTRUCTION: The riprap shall be hand placed, plain riprap without grout and shall conform to the plans, Sections 220 and 703 of the Uniform Standard Specifications, and these Construction Specifications. Bedding and filter fabric shall comply with the plans and these Construction Specifications.

SUBSECTION 220.2.1 - RIPRAP MATERIALS: Rock shall be sound and durable, free from clay or shale seams, cracks or other structural defects. The Bulk Specific Gravity (SSD) shall be determined in accordance with the requirements of AASHTO T-85 and shall be a minimum of 2.4. Rock used to construct Riprap shall be angular in shape and rock shape ratio (least over greatest dimensions) shall not be less than one-third and a gradation in reasonable conformity with that shown herein. Control of gradation will be by visual inspection.

Riprap for the ditches parallel to Broadway Road shall be non-angular.

When a source of rock is designated, it shall be **CONTRACTOR'S** responsibility to negotiate for the material, obtain the right-of-way and pay all royalty fees and damages, if any.

The source from which the stone will be obtained shall be selected well in advance of the time when it will be required for the work. The acceptability of the stone will be determined by the Engineer. If testing is required, suitable samples of stone shall be taken in the presence of the Engineer at least 25 days prior to its use. For angular riprap the approval of some rock fragments from a particular quarry site shall not be construed as the approval of all rock fragments taken from that quarry.

Mechanical equipment, a sorting site, and labor needed to assist in checking gradation shall be provided by **CONTRACTOR** at no additional cost to the **COUNTY**.

SUBSECTION 220.2.1 - FILTER FABRIC MATERIALS: Filter fabric shall be supplied in accordance with and conform to the material requirements of these Construction Specifications. Special attention shall be given to the required survivability of the filter fabric.

The identification, packaging, handling, and storage of the geotextile fabric shall be in accordance with ASTM D 4873. Fabric rolls shall be furnished with suitable wrapping for protection against moisture and extended ultraviolet exposure prior to placement. Each roll shall be labelled or tagged to provide product identification sufficient to determine the product type, manufacturer, quantity, lot number, roll number, date of manufacture, shipping date, and the product number and name to which it is assigned. Rolls shall be stored on the site or at another identified storage location in a manner which protects them from the elements. If stored outdoors, rolls shall be elevated and protected with a waterproof, light colored, opaque cover. At no time, shall the fabric be exposed to sunlight for a period exceeding fourteen (14) days.

Certification of Compliance, conforming to the requirements of Section 106 shall be submitted to the Engineer by **CONTRACTOR** upon delivery of the filter fabric for use on a specific project. Each lot or shipment must be approved by the Engineer before the materials are incorporated in the work.

Filter fabric shall be furnished in protective covers capable of protecting the materials from harmful environmental conditions such as ultraviolet rays, abrasion, extreme heat, and water. Storage of the materials shall be in a manner to prevent damage, contamination, or deterioration of the materials.

Filter fabric for use under riprap, as specified, shall be a non-woven fabric consisting only of long chain polymeric filaments such as polypropylene or polyester, formed into a stable network such that the filaments retain their commonly encountered chemicals, resistant to rot and mildew, and shall have no tears or defects which adversely affect or alter its physical properties. The physical requirements for the bank protection fabric shall be as specified below:

Filter fabric shall meet the following minimum average roll values:

<u>PROPERTY</u>	<u>REQUIREMENT</u>	<u>TEST METHOD</u>
Grab Tensile Strength, lbs.	200	ASTM D 4632-86
Grab Elongation at Break, %	45 min./115 max.	ASTM D 4632-86
Puncture Strength, psi	80	ASTM D 3787
Burst Strength, lbs.	320	ASTM D 3786
Trapezoidal Tear, lbs.	50	ASTM D 4533-85
Permitivity, sec-1	.10	ASTM D 4491-85
Apparent Opening Size U. S. Standard Sieve Size	30-100	ASTM D 4751-87
Ultraviolet Stability, %	70	ASTM D 4355-84

Minimum average roll values represent the average test results for a lot in the weaker direction when sampled according to ASTM D 4354 and tested according to the test method specified above.

SUBSECTION 220.3 - PREPARATION OF GROUND SURFACE: Areas on which fabric and riprap is to be constructed shall be cleared, grubbed, and excavated or backfilled to produce a ground surface in reasonable conformance with the lines and grade indicated in the plans. Hand excavation may be necessary to obtain neat angles and corners of proper depth and shape. Excavation shall include the depth required for bedding where bedding is required.

SUBSECTION 220.4 - FILTER FABRIC AND RIPRAP INSTALLATION: Filter fabric shall be placed in the bed prior to placement of the riprap. Filter fabric shall be placed in the manner and at the location specified. The fabric shall be loosely laid and not placed in a stretched condition.

The strips shall be placed to provide a minimum of 24 inches overlap for each joint. On horizontal joints, the uphill strip shall overlap the downhill strip. On vertical joints, the upstream strip shall overlap the downstream strip. The fabric shall be protected at all times during construction from extensive exposure to sunlight.

Placement through water is not permitted unless specifically approved by the Engineer.

Where the depth of riprap is greater than 18 inches, bedding shall be used. The bedding material shall be spread uniformly on the fabric to a depth of six (6) inches and shall be free of mounds, dips or windrows. Compaction of the bedding material will not be required.

Rocks shall be carefully placed by hand on the bedding material and filter fabric in such a manner as not to damage the fabric. If, in the opinion of the Engineer, the fabric is damaged or displaced to the extent that it cannot function as intended, **CONTRACTOR** shall remove the rock, regrade the area if necessary, and replace the filter fabric.

The rock shall be placed to its specified thickness in one operation and in a manner which will produce a reasonably well graded mass with a minimum amount of voids and with the larger rock evenly distributed throughout the mass.

No method of placing the rock that will cause segregation shall be used. Hand placing or rearranging of individual rock will be necessary to obtain the specified results.

SUBSECTION 220.4 - METHOD OF MEASUREMENT: Riprap shall be measured by the square yard of protection constructed by computing the surface area parallel to the riprap surface.

SUBSECTION 220.5 - PAYMENT: The accepted quantities of riprap, measured as provided above, will be paid for at the contract unit bid price per square yard, for **RIPRAP WITH FABRIC**, which price shall be full compensation for the work, **COMPLETE-IN-PLACE**, including excavation, bedding, fabric, and the riprap stone.

SECTION 225 - WATERING: Watering consists of providing and distributing water as necessary to compact the subgrade, fill material, and aggregate base course, and provide dust control as approved by the Engineer.

Payment for watering will be made at the contract unit bid price per 1000 gallons of water for ITEM No. 225 - WATERING, which price shall be full compensation for this work, COMPLETE IN PLACE.

SECTION 301 - SUBGRADE PREPARATION: Maricopa County has removed large trees and their root balls from the right-of-way. However, some isolated trees fifteen inch (15") diameter and smaller remain. Subgrade preparation shall include the removal of trees and tree stumps remaining in the right-of-way.

Subgrade Preparation shall also include the construction of drainage ditches as shown in the roadway typical sections and plan and profile drawings and the compaction of shoulders. Shoulders shall be rolled and compacted to a minimum of ninety-five percent (95%) Proctor density.

Existing asphalt and other existing bituminous roadway surfacing materials may be used as fill if they are thoroughly broken up to a size, not exceeding four inches (4") to the satisfaction of the Engineer, mixed with other fill material and placed at least two (2) feet below subgrade elevation.

The earthwork quantities shown on the roadway plans include the existing asphalt.

Any disposal area selected by **CONTRACTOR** shall be approved by the Engineer prior to its use. Disposal of waste in approved areas shall be made in such a manner that natural drainage will not be blocked or diverted unless otherwise requested by the Engineer. (Refer to Section 10 of the General Site Regulations)

The earthwork quantities shown on the plans are approximate and were determined during the design process. The earthwork quantities are listed for the sole purpose of aiding the bidder in formulating its bid.

Payment for subgrade preparation will be made at the contract unit bid price per square yard per ITEM NO. 301 - SUBGRADE PREPARATION, and such Payment shall be compensation in full for the item, COMPLETE-IN-PLACE.

Payment for subgrade preparation for temporary paved detours will be in accordance with Section 321 of these Construction Specifications.

SECTION 310 - UNTREATED BASE: Select Material and Aggregate Base shall conform to the requirements of Section 702 of the Uniform Standard Specifications and shall be crushed in accordance with Section 702.2. Select Material shall be Type "A".

CONTRACTOR shall furnish the Engineer certified weight tickets covering all of the Select Material and Aggregate Base placed on the project. Final pay quantities will be based upon the scale tickets accepted by the Engineer.

Payment for untreated base will be made at the contract unit bid price per ton for item NO. 310 - AGGREGATE BASE, which shall be full compensation for this work, COMPLETE-IN-PLACE.

Payment for aggregate base used for temporary paved detours will be in accordance with Section 321 of these Construction Specifications.

SECTION 315 - BITUMINOUS PRIME COAT (CONTINGENT ITEM): The bituminous material shall be Grade MC-70 or MC-250 liquid asphalt, as determined by the Engineer. Prime coat shall be applied to the total width of the aggregate base material at the rate of 0.30 gallon per square yard, unless otherwise specified by the Engineer. Prime Coat shall be allowed to penetrate for not less than 48 hours prior to the commencement of the asphalt concrete paving.

SECTION 321 - ASPHALTIC CONCRETE: The bituminous material to be used shall be AC-20 or AC-40, and comply with Table 711-1 of the Uniform Standard Specifications.

The mineral aggregate shall meet the grading requirements for the mix designations specified on the plans in accordance with Section 710 of the Uniform Standard Specifications and these Special Provisions. See also section 710.2.5 and 710.7 herein.

In addition to pugmill type mixing plants, drum dryer mixers may be used in accordance with Standard Specification 710.9. The moisture content of the bituminous mixture immediately behind the paver shall not exceed three percent (3%). The proper proportioning of the material at the cold feed shall be determined by **CONTRACTOR** and approved by the Engineer prior to the production of asphaltic concrete. Production shall not commence until Calibration tests indicate that an acceptable product can be obtained.

The correct proportions of each aggregate size introduced into the mixer shall be drawn from the storage bins by a continuous feeder, approved by the Engineer, which shall supply the correct amount of aggregate in proportion to the bituminous material and shall be so arranged that the proportion of each aggregate size can be separately adjusted. The continuous feeder for the aggregate may be mechanically or electrically activated.

The plant shall be equipped with a sampling device to take representative composite samples of the cold feed. If tests indicate non-compliance with specifications, operation shall cease until proper corrections have been made.

The production of the plant shall be governed by the rate required to obtain a thorough and uniform mixture of the materials. Mixing shall continue until the uniformity of coating, when tested in accordance with the requirements of AASHTO T-195, is at least 95 percent.

All permanent Asphaltic Concrete shall be dense graded, adequately compacted and installed at the thicknesses and locations as shown on the plans.

Temporary pavement for detours shall be two (2) inches of asphaltic concrete over four (4) inches of aggregate base.

CONTRACTOR shall furnish the Engineer certified weight tickets covering all the Asphaltic Concrete placed on the project. For permanent asphaltic concrete the final pay quantities will be based upon the scale tickets accepted by the Engineer.

No measurement or payment will be made for any saw cutting for this project, the cost of which shall be considered incidental to this item.

Payment for permanent Asphaltic Concrete will be paid for at the contract unit price bid per ton for ITEM NO. 321- ASPHALTIC CONCRETE (C-3/4) and ITEM NO. 321 - ASPHALTIC CONCRETE (D-1/2), which price shall be full compensation for the work, COMPLETE-IN-PLACE.

Payment for temporary pavement for paved detours will be paid for at the contract unit price bid per square yard for PAVED DETOUR, which price shall be full compensation for the item, COMPLETE-IN-PLACE including subgrade preparation and aggregate base.

SECTION 329 - BITUMINOUS TACK COAT: The tack coat shall be grade SS-1h (diluted). Tack coat shall be applied at the rate of 0.05 to 0.10 gallons per square yard, or as requested by the Engineer.

Measurement for Bituminous Tack Coat will be by the ton of diluted mixture.

SECTION 333 - FOG SEAL COATS (CONTINGENT ITEM): The asphalt concrete fog seal coat shall be composed of the application of an emulsified asphalt and sand blotter when necessary.

The fog seal shall be as specified in Section 713 of the Uniform Standard Specifications.

The material shall be approved by the Engineer in accordance with Section 333.6 of the Uniform Standard Specifications. The application rates, dilution and curing shall be as requested by the Engineer in accordance with Section 333.6 of the Uniform Standard Specification.

Payment for Fog Seal Coat will be paid for at the contract unit price per ton of diluted mixture per ITEM NO. 333 - FOG SEAL, which price shall be full compensation for the work, COMPLETE IN PLACE.

SECTION 333 - BLOTTER SAND (CONTINGENT ITEM): A sand blotter may be applied if requested by the Engineer prior to opening the streets to traffic. **CONTRACTOR** shall also be responsible for sweeping the sand within 24 hours of opening to traffic. If the paved roadway must be sanded, the surface shall be sanded at two to three pounds per square yard. No more sand shall be used than necessary, and the amount specified shall not be increased without prior approval of the Engineer. The blotter sand shall be as per MAG Uniform Standard Specifications for Public Works Construction Section 333.3.2 and 701.

Payment for Sand Blotter, will be paid for at the unit bid price, for ITEM NO. 333 - BLOTTER SAND, which price shall be full compensation for the work, COMPLETE-IN-PLACE.

SECTION 340 - CONCRETE CURB, GUTTER, SIDEWALK, DRIVEWAY ENTRANCE, AND ALLEY ENTRANCE: The work under this section shall consist of furnishing all labor, equipment and materials for constructing Portland Cement Concrete Curb and Gutter, Sidewalk Handicap Ramps, and Concrete Driveway and Alley Entrances in accordance with the plans, the Uniform Standard Specifications, and these Construction Specifications.

All concrete shall be Class "A" conforming to the requirements of Section 725 of the Uniform Standard Specifications.

CURB AND GUTTER:

Payment will be made at the contract unit bid price per lineal foot for CONCRETE CURB AND GUTTER, COMPLETE IN PLACE.

CONCRETE DRIVEWAY ENTRANCES and CONCRETE ALLEY ENTRANCE:

Payment will be made at the contract unit bid price per square foot for these items, COMPLETE IN PLACE.

CONCRETE SIDEWALK HANDICAP RAMPS:

Payment will be made for at the contract unit bid price per each for CONCRETE SIDEWALK RAMP , COMPLETE IN PLACE.

SECTION 345 - ADJUSTING FRAMES, COVERS, VALVE BOXES, AND WATER METER BOXES: The work under this section shall consist of furnishing all labor, equipment, and materials for adjusting frames, covers, valve boxes and water meter boxes in accordance with the plans, Uniform Standard Specifications, City of Phoenix Supplement to the Uniform Standard Specifications and these Construction Specifications. Including adjustment for temporary paving.

Adjustments within new permanent pavement or detour pavement shall be done before placing the asphalt concrete surface course.

CONTRACTOR shall maintain access to the valve operating nut of all water valves within the project's limits from the date of the Notice-to-Proceed to Acceptance of the Project by the **COUNTY**.

Payment for these adjustments will be made at the contract unit bid price for each in accordance with the bid schedule, which price shall be full compensation for the work, COMPLETE-IN-PLACE.

SECTION 350 - REMOVAL OF EXISTING IMPROVEMENTS: The work under this section shall consist of the removal and disposal of any obstacle to construction, unless specifically noted on the plans for removal and relocation by other entities.

CONTRACTOR shall be responsible for the removal of all existing signal poles and delivery of them to the City in accordance with City of Phoenix permit. **CONTRACTOR** shall remove all abandoned signal facilities and foundations.

Arrangements for disposal of all waste material shall be the responsibility of **CONTRACTOR**, except that all usable pipe culvert, as determined by the Engineer, shall be stockpiled within the right-of-way for salvage by the **COUNTY**.

If a Maricopa County Landfill is selected for disposal of road construction waste and/or debris, a Maricopa County Landfill Use Permit will be required. Application for the permit can be made at the Maricopa County Landfill Office, located at 2801 West Durango Street, Phoenix, Arizona 85009 (Telephone Number 506-7060). Charges will be levied on a volume basis for each load delivered to the landfill in accordance with the current Landfill fee schedules which are available at the above address.

Payment for the Removal of Existing Improvements shall be paid for at the unit bid price per lump sum for **REMOVAL OF EXISTING IMPROVEMENTS**, which price shall be full compensation for the work.

REMOVAL OF CONCRETE CURB AND GUTTER, CONCRETE PIPE, BLOCK FENCE AND GUARD RAIL:

The work under this item shall consist of removal of concrete curbs and gutter, single curb, and extruded curb concrete pipe, block fence and footing, and guardrail at the locations designated on the plans and/or as necessary for the construction of this project and shall include the disposal of the broken concrete and debris.

Measurement shall be by the linear foot and Payment will be made at the unit price for **REMOVAL OF CONCRETE CURB AND GUTTER, CONCRETE PIPE, BLOCK FENCE, AND GUARDRAIL** items, which price shall be full compensation for the work.

401.5.1 - SPECIAL TRAFFIC REGULATIONS: Major and collector streets are defined as: 35th Avenue, 43rd Avenue and Broadway Road.

A road closure of Broadway Road west of 35th Avenue is authorized. Access to existing homes on Broadway Road during closure shall be maintained on the Broadway frontage Road and diverted to 36th Avenue for access while Broadway Road is closed for construction. Access shall be maintained through construction for businesses west of Station 42+00 which shall have access to driveways on the north and south sides of Broadway.

For north and south bound traffic on 35th Avenue the contractor shall maintain two lanes of traffic and at the intersections shall maintain a third center lane for left turns with a minimum vehicle storage length of 120 feet. (See phasing for approximate lengths of

paved detour.) Two lanes of traffic shall be maintained on Broadway Road east leg after the west leg is closed.

Traffic shall be maintained on pavement at all times. **CONTRACTOR** shall provide necessary paved travel lanes to complete any construction. Traffic lanes shall be a minimum of twelve feet (12) in width and have a safe operating speed of twenty five (25) miles per hour. For all temporary travel lanes on Broadway Road and 35th Avenue striping shall be used. For this purpose any striping to be removed from existing pavement, or construction striping placed on existing pavement where the pavement will remain after construction, shall be removed in accordance with accepted procedures at the cost of the **CONTRACTOR**. No construction striping shall be placed on the final lift of permanent pavement.

The construction of temporary travel lanes shall comply with Section 321. Grade of travel lanes shall be the same elevation as existing road. Shoulders shall be dressed with a 10 to 1 slope.

Jersey Barriers shall be used to move traffic from the 35th Avenue alignment and to close the west leg of Broadway Road at the intersection.

At the signalized intersection of 35th Avenue, **CONTRACTOR** shall install a temporary traffic signal to allow removal of existing signal and provide traffic control for all temporary travel lanes. Temporary Signal shall include two (2) left turn indications. When new signal is operational, **CONTRACTOR** shall remove the temporary signal.

The temporary signal shall meet all requirements of the Manual on Uniform Traffic Control and the City of Phoenix signal standards. Timing of the signal shall be as regulated by the City of Phoenix. The temporary signal shall be maintained by **CONTRACTOR** under City requirements until the City of Phoenix has completed installation of new signal.

35th Avenue is within the city limits of the City of Phoenix, and all traffic control, temporary signal and water facility relocation's shall comply with construction staging, appropriate permits, City of Phoenix Traffic Barricade Manual requirements, the City of Phoenix supplement to the MAG Uniform Standard Specifications and these Construction Specifications.

All advance warning construction signs shall comply with distance advisory criteria and all conflicting speed limit signs shall be covered.

CONTRACTOR shall provide a uniformed off-duty sheriff deputy or police officer to assist with traffic control at 35th Avenue signalized intersection whenever traffic in any one direction is restricted. An officer or deputy may be required at other times or locations if construction conditions dictate or at the request of the Engineer.

Construction shall not commence or proceed without an approved Traffic Control Plan. At the pre-construction conference, **CONTRACTOR** shall submit for review his plan for the sequence of construction and the planned traffic flow during construction. A Traffic Control Plan covering the signing and staging shall be submitted and approved prior to the start of each stage of construction. The Traffic Control Plans shall address all

temporary travel lane alignment, width, detour construction, staging and other Construction Specification requirements.

401.5.2 - CONSTRUCTION STAGING: In order to keep traffic disruption to a minimum, **CONTRACTOR** shall complete construction on Broadway Road west of 35th Avenue, all ditch and pipe relocation work prior to any road construction on 35th Avenue. **CONTRACTOR** may submit a request for a different staging for approval. The criteria is to complete the majority of construction prior to major traffic disruptions and to maintain maximum traffic flow on paved surface with minimum disruption.

Stage I:

CONTRACTOR shall close the west leg of Broadway Road and construct this segment of Broadway Road and 43rd Avenue to the north side of the Weir Avenue intersection up to the next to last lift of pavement.

CONTRACTOR shall install the 35th Avenue storm drain pipe from the edge of existing pavement at approximately Station 22 + 00 to the end of pipe at Station 25 + 98.

CONTRACTOR shall construct a temporary traffic signal at the intersection of 35th Avenue to provide three lane by pass on the west side. If the intersection is to be spanned, poles shall be placed on the southwest and northeast corner.

CONTRACTOR remove the fire hydrant on the southwest corner of Broadway Road. Prior to removal of hydrant, contact Mr. Gerald Arakaki, City of Phoenix Water Design and Construction, at 261-8229. **CONTRACTOR** shall relocate this fire hydrant after removal of the detour.

CONTRACTOR shall construct on the west side of 35th Avenue a paved detour from approximately Station 14+00 to approximately Station 27+00. At the intersection three (3) travel lanes shall be provided from approximately Station 18+00 to Station 23+00. The edge of temporary pavement shall be 18 feet or greater from centerline of the 35th Avenue storm drain pipe and shall provide space for two lanes of 35th Avenue to be constructed clear of traffic. Water valves shall be adjusted to grade with the majority placed within the center lane of the detour pavement. **CONTRACTOR** shall place a steel plate over the steel cover of the utility vault and set the grade of the detour paving to match the plate and the sewer manhole in the southeast corner of the intersection.

During the removal of the detour in the area of the water valves a rectangular section of pavement shall be neatly cut and left to avoid a second readjustment of the valves.

CONTRACTOR shall construct two lane paved detour on the south side of Broadway Road from 35th Avenue to approximately Station 90+00. The near edge of pavement shall be 10 feet from center line of pipe and shall provide space for two lanes of Broadway Road to be constructed clear of traffic.

Stage II:

When Stage I is completed, **CONTRACTOR** shall move traffic onto temporary travel lanes and install remainder of storm drain and construct the traffic free road segments to the next to last lift of pavement.

Stage III:

When Stage II is completed, **CONTRACTOR** shall move traffic onto new road segment, remove temporary detour and complete remaining road construction to next to last lift of pavement. Broadway Road west of 35th Avenue shall remain closed.

Stage IV:

When all pavement is placed to the next to last lift of pavement, **CONTRACTOR** shall complete all remaining construction to include paving, new signal, striping and relocation/adjusting utilities. The City of Phoenix will install new signal poles, cabinet, detection and permanent pavement striping within the City of Phoenix jurisdiction and on Broadway Road east of 35th Avenue.

SECTION 401.7 - PAYMENT:

401.7.1 Measurement for off-duty police officers and sheriff deputies shall be measured by manhours spent on this Project as UNIFORMED OFF-DUTY OFFICER. Payment for off-duty police officers shall be made at the current hourly rate, which is approximately \$21.00 per hour, for the item UNIFORMED OFF-DUTY OFFICER, and will be paid for on an as-used basis.

401.7.2 Payment for temporary concrete barrier will be made at the contract unit bid price per lineal foot for ITEM 401.04 TEMPORARY CONCRETE BARRIER, COMPLETE-IN-PLACE.

401.7.3 Payment for new temporary pavement construction for the paved detour will be made in accordance with Section 321 of these Construction Specifications.

401.7.4 Payment for TEMPORARY SIGNAL will be made at the unit bid price for Temporary Signal which price shall be full compensation for the work, COMPLETE-IN-PLACE.

401.7.5 Payment for all other items associated with Traffic Control including temporary striping and its removal will be paid at the lump sum bid price for TRAFFIC CONTROL which price shall be full compensation for the work, COMPLETE-IN-PLACE.

SECTION 402 - ELECTRICAL CONDUIT: The work under this section shall consist of furnishing and installing underground PVC conduit, including excavation, backfill, compaction and landscaping necessary to complete the work at the locations specified on the plans or as requested by the Engineer. Installation shall be in accordance with the Maricopa County Standard Details for the 43rd Avenue location.

All PVC conduit and fittings shall be of the size indicated on the project plans and be rigid polyvinyl chloride (PVC) non-metallic type, conforming to the requirement of UL 651 for rigid non-metallic conduit. PVC conduit and fittings shall be Schedule 40 heavy wall and rated for use at 90 degrees centigrade.

All conduit and conduit fittings to be installed above ground shall be rigid metal type manufactured of galvanized steel conforming to the requirements of UL 6 for rigid metal conduit.

Conduit installed in protected areas such as behind curbs, in sidewalks, etc. that are not subject to any vehicular traffic shall be at a minimum depth of twenty-four inches (24") below final grade. Conduits installed under roadways, driveways or any open areas where it is possible for vehicles to drive shall be at a minimum of thirty inches (30") below final grade. When conduit cannot be installed at the minimum depth, it shall be completely encased in three inches (3") of concrete.

Field PVC conduit bends shall be made without crimping or flattening, using the longest radius practical, but not less than specified by the National Electric Code, Article 347-13. Collapsed conduit, no matter how small, is not acceptable and shall be replaced at **CONTRACTOR'S** expense.

The number of bends between pull boxes or between a pull box and foundation shall not contain more than the equivalent of two (2) quarter bends (180 degrees, total), including the bends at the pull boxes or foundations, Article 347-14 of the National Electric Code. All conduit cuts shall be square and trimmed after cutting to remove all rough edges. All connections shall be of the solvent weld type or approved equal.

PVC conduit entering a pull box or foundation shall be fitted with a factory made 90 degree elbow with minimum sweep radius per the table below. Conduit shall enter pull boxes near the sides and ends and extend no more than four inches (4") above the bottom of the pull box including the length of the conduit bell end.

<u>PVC Sizes</u>	<u>Radius</u>
1 in.	5.75 in.
1 1/2 in.	8.25 in.
2. in.	9.50 in.
2 1/2 in.	10.50 in.
3 in.	13.00 in.

Each run of conduit which terminates within a pull box shall be capped (not glued) with PVC caps.

Each run of conduit shall be installed containing a continuous run of one No. 8 AWG bare copper wire to be used as a pull wire. The wire shall be at least two feet (2') longer than the run of conduit. Each run of the wire shall be spring coiled and inserted into the

conduit so as to be recoverable at a later date. Nylon rope 1/4" in size is acceptable in lieu of No.8 AWG bare copper pull wire and the extra length fastened to the inside of the cap.

CONTRACTOR shall place warning tape in all open trenches in which conduit is placed. All warning tape shall be buried at a depth of six to eight inches (6"-8") below final grade.

Conduit warning tape shall be 4 mil inert plastic film specially formulated for prolonged use underground and shall be a minimum of three inches (3") wide. All tape shall be highly resistant to alkalis, acids and other destructive agents found in the soil.

The tape shall have a continuous printed message warning of the location of underground conduits. The message shall be in permanent ink formulated for prolonged underground use and shall bear the words "CAUTION - ELECTRIC LINE BURIED BELOW" in black letters on a yellow or red background.

Conduit will be measured by the lineal foot from the center of the pull boxes and the edge of foundations along the runs installed and accepted.

Conduit inside pull boxes and foundations will not be measured for Payment.

Installation of the 35th Avenue Signal conduit shall be in accordance with the plans City of Phoenix Supplement to the Uniform Standard specifications and these special provisions. The materials and installation of the PVC conduit for future irrigation shall be considered the same as for the electrical conduit.

Street light conduits shall be in accordance with Salt River Project plans and specifications.

Payment for this item will be made at the contract unit bid prices for the item COMPLETE-IN-PLACE.

SECTION 403 - PULL BOXES: The work under this section shall consist of furnishing and installing all pull boxes, including excavation, backfill, compaction and landscaping necessary to complete the work at the locations specified on the plans or as requested by the Engineer. Maricopa County Standard Details as shown on the plans shall apply to the 43rd Avenue location.

Pull box sizes shall be as specified on the project plans and shall comply with the applicable MCDOT Standard Drawing No. S-201-1.

At the request of the Engineer, **CONTRACTOR** shall furnish pull box drawings and specifications which specify steel reinforcement and concrete used on the project.

Pull boxes shall be set on an eighteen inch (18") bed of one inch (1") rock and adjusted so that they are level at curb or sidewalk grade. When no grade is established, pull boxes shall be set as requested by the Engineer.

A 1/2 inch felt expansion joint shall be installed on all sides of pull boxes set in concrete. Pull box covers shall be secured with the "L" bolts, nuts and washers before final acceptance of the project.

When signal interconnect "straight-through" pull boxes are called out, the conduit entering the pull box shall be curved gently in the ten feet adjacent to the pull box to bring the conduit ends up to the proper elevation inside the box. For the typical "straight-through" pull boxes, the conduit shall terminate two to four inches inside the box wall and be directly in line so as to facilitate a straight-through pull of cable. For traffic signal interconnect layout information see "straight-through" pull box installation detail MCDOT Standard Drawing No. S-209-2.

Installation of the 35th Avenue Signal Pull Boxes shall be in accordance with City of Phoenix Supplement to the MAG Uniform Standard specifications, the plan details and these special provisions.

Pull boxes will be measured by the number of units of each type specified, in accordance with the project plans and specifications.

Payment for this item shall be made at the unit bid prices for the item, which prices shall be full compensation for the item, COMPLETE-IN-PLACE.

SECTION 404 - POLE FOUNDATIONS: The work under this section shall consist of furnishing all materials and constructing foundations, conduits, and junction boxes for traffic signals in accordance with the locations and details designated on the City of Phoenix plan Details, the City of Phoenix Supplement to MAG Uniform Standards Specifications and these Construction Specifications.

SECTION 420 - FENCE INSTALLATION: CONTRACTOR shall install a (6) six foot high chain link fence with barbed wire on top in accordance with the plans and these Construction Specifications. Work shall include installation of hinged gates with rubber wheel rollers.

Measurement will be per linear foot of fence and gate.

Payment will be made at the unit bid price for 6' CHAIN LINK FENCE, which price shall be full compensation for the item, COMPLETE-IN-PLACE.

SECTION 450 - PAVEMENT MARKINGS (TRAFFIC PAINT and PAVEMENT MARKERS):

450.1 STANDARD SPECIFICATIONS: Installation of roadway pavement markings in Maricopa County shall be performed in accordance with the Plans and the requirements of the following documents:

450.1.1 Manual on Uniform Traffic Control Devices for Streets and Highways, latest edition.

450.1.2 Arizona Department of Transportation Standard Specification for Road and Bridge Construction, latest edition.

450.2 INTENT and PURPOSE: These construction specifications are intended to be complementary to above standard specification for **MARKING ROADWAYS** in Maricopa County, shall provide a more detailed description, and modify the construction specifications where indicated. In case of discrepancies or conflicts **CONTRACTOR** shall consult the **ENGINEER**.

450.3 DESCRIPTION OF WORK: **CONTRACTOR** shall furnish labor, materials, equipment, tools, transportation and supplies required to complete the work in accordance with the plans, construction specifications and these pavement marking specifications. The work under this section shall consist of:

450.3.1 Cleaning and preparing the pavement surface and laying out markings;

450.3.2 Applying white and yellow traffic paint and reflective glass beads;

450.3.3 Placing raised pavement markers;

450.3.4 Applying TYPE I preformed pavement marking tape, arrows, legends, and symbols;

450.4 CONTROL OF WORK: No pavement marking shall be applied to the project by **CONTRACTOR** until field inspection of the striping layout is completed and approved by the **ENGINEER**. Any pavement markings placed prior to inspection and approval of the **ENGINEER** is subject to removal and reinstallation at **CONTRACTOR's** expense.

In the event conflicts exist between actual field conditions and the striping plans, **CONTRACTOR** shall notify the **ENGINEER** immediately.

CONTRACTOR shall maintain appropriate traffic control during the work.

450.5 COORDINATION AND SEQUENCE OF WORK:

450.5.1 STRIPING LIMITS: **CONTRACTOR** shall verify the striping limits of the project before beginning work. Striping limits may exceed the construction project limits to match existing striping.

450.5.2 REMOVAL OF EXISTING MARKINGS: Removal of existing pavement markings shall be completed prior to the layout and marking activity and shall be performed in accordance with Section 460 of these specifications. Removal of existing striping is considered incidental work and shall be included in the unit price for installation of new pavement markings.

450.5.3 PRESERVATIVE SEAL / FOG SEAL and SAND BLOTTER:

450.5.3.1 If the **ENGINEER** determines that a seal is required, sufficient drying time, (a minimum of 48 hours), shall be allowed before applying pavement markings.

450.5.3.2 If a sand blotter is required, the roadway surface shall be swept free of sand prior to pavement marking applications. The preservative seal / fog seal and sand blotter shall be applied prior to the acceptance of the project by the **COUNTY** and before any pavement markings are applied.

450.5.3.3 After the 48 hour drying time has passed and the preservative seal or fog seal remains tacky, or if excessive oil has risen to the roadway surface, (bleeding), a sand blotter shall be applied to absorb the excess oil. If the seal remains tacky, no pavement markings shall be applied to the roadway surface. **CONTRACTOR** shall notify the **ENGINEER** of the problem. The **ENGINEER** will decide what further action shall be taken.

450.5.3.4 If no preservative seal / fog seal or sand blotter is applied, the pavement markings shall be applied in accordance with **CONTRACTOR's** schedule.

450.5.3.5 If seal or sand blotter is applied after the installation of the paint, tape, legends, symbols, or raised pavement markers, all pavement markings affected by the seal or sand blotter shall be removed and reinstalled at **CONTRACTOR's** expense.

450.5.4 RUBBERIZED ASPHALTIC CONCRETE / ASPHALTIC CONCRETE ROADWAY:

450.5.4.1 After installing rubberized asphaltic concrete or asphaltic concrete roadway surface, a cooling down period of 12 to 24 hours minimum, shall be implemented prior to the application of any pavement markings.

450.5.4.2 If the roadway is tacky or excessive oil has risen to the roadway surface, (bleeding), instructions in Section 450.5.3 shall be followed.

450.6 MATERIALS:

450.6.1 TRAFFIC PAINT:

450.6.1.1 SPECIFICATIONS: Section 708, ADOT Standard Specifications for Road and Bridge Construction, latest edition, shall be used as a reference.

450.6.1.2 PERFORMANCE: The paint shall not bleed, curl, or discolor when being applied to the roadway surface. If bleeding, curling or discoloration occurs, the unsatisfactory areas shall be given additional coat(s) of paint to correct the problem. In the event that the additional coat(s) are not sufficient, the **ENGINEER** shall determine what method of correction may be used. Such corrections will be at **CONTRACTOR's** expense.

450.6.2 RAISED PAVEMENT MARKERS (RPM): Reference the Technical Specifications in Section 706, ADOT Standard Specifications for Road and Bridge Construction, latest edition, except that all reflectorized RPM's shall be non-adhesive with an adhesive surface.

450.6.3 TYPE I - PREFORMED PLASTIC PAVEMENT MARKING TAPE: Type I - Performed Plastic Pavement Marking Tape shall conform to ADOT specification, Section 706 - Standard Specifications for Road and Bridge Construction, latest edition.

450.7 CONSTRUCTION REQUIREMENTS:

450.7.1 METHODS and EQUIPMENT: The methods and equipment used for this work shall be according to Section 705, 706, 707, and 708 of the ADOT Standard Specifications for Road and Bridge Construction, latest edition.

450.7.2 CLEANING and PREPARING THE PAVEMENT SURFACE: Before applying any paint, tape or raised pavement markers to the roadway surface, the surface shall be free of dirt, grease, oils, acids, laitance or other foreign matter that would reduce the bond between the pavement markings and the road.

Area that cannot otherwise be satisfactorily be cleaned shall be scrubbed with a biodegradable chemical called Citrus Solve Plus or equivalent.

After a thorough cleaning, the surface shall be rinsed with water and completely dried before applying any paint, tape or raised pavement markers.

450.7.3 FIELD LAYOUT and MARKING: **CONTRACTOR** shall establish a string line or another method when laying out the striping in the field and shall properly spot mark the project at five foot (5') intervals in conformance with the striping design shown on the plans.

Upon completion **CONTRACTOR** shall notify the **ENGINEER** that the project is ready for inspection. The **COUNTY** will inspect the project and either accept the work or identify unsatisfactory work within three working days.

No Passing Zone (NPZ), shown on the striping plans, are subject to change after a field inspection by the **ENGINEER**. All NPZ's will be determined in the field by the **ENGINEER** at the time of field inspection.

450.7.4 TOLERANCES: New pavement striping shall not vary more than one half inch (1.27 centimeters) in fifty feet (15 meters) from the specified striping design.

Existing pavement markings requiring repainting, shall be repainted to completely cover existing markings within one quarter inch (1/4") and be within a longitudinal tolerance of six inches (6") at the end of each stripe. This standard shall apply to re-striping, bleeding or discolored areas or if it is determined by the **ENGINEER** that additional coat(s) of paint are needed.

450.7.5 PAVEMENT MARKINGS:

450.7.5.1 STRIPES: All measurements, on parallel line, shall be taken from center of stripe to center of stripe or center of stripe to edge of asphalt, not to face of curb.

450.7.5.2 CURBED MEDIANS and ISLANDS (TRAFFIC PAINT ONLY): All curbed medians that are four feet (4') to six feet (6') in width shall be painted yellow across the "entire top" of the median and curb, from radius to radius, and continue along the top of the curb and its vertical face for an additional twenty-five feet (25'). Paint shall not be applied over a decorative design in the median.

All curbed medians that are over six feet (6') wide shall be painted only along the top of the vertical curb and face from radius to radius. In addition, painting shall continue along the top of the curb and its vertical face for an additional twenty-five feet (25').

All curbed median shall be painted in yellow traffic paint. All islands shall be painted white as designated on the plans. Thermoplastic or tape material shall not be used.

450.7.5.3 NON-CURBED MEDIANS: A four inch (4") yellow line shall be applied one foot (1') off the edge along all non-curbed median.

Raised pavement markers shall be installed four inches (4") to the outside of the yellow median line.

450.7.5.4 TYPE I - PREFORMED PLASTIC PAVEMENT MARKING TAPE:

450.7.5.4.1 CROSSWALKS and STOPBARS: All standard crosswalk lines shall be twelve inches (12") wide and spaced ten feet (10') apart.

Measurement for crosswalk lines shall be from inside the line to inside the line, not center to center.

High visibility crosswalk lines shall be twelve inches (12") wide and spaced fifteen feet (15') apart. High visibility crosswalks shall include diagonal lines.

The diagonal lines shall be installed at a 45 degree angle going from lower left to upper right. The diagonal lines shall be twenty-four inches (24") wide and spaced six feet (6') to eight feet (8') apart. Measurement between the diagonal lines shall be from center of stripe to center of stripe.

All school crosswalk lines shall be "yellow". The lines are twelve inches (12") wide and spaced fifteen feet (15') apart.

Stopbar and crosswalk/ stopbar combinations shall be twenty-four inches (24") wide.

450.7.5.4.2 ARROWS: Arrows shall be constructed according to ADOT Signing and Marking Standard, Drawing No. 4-M-1.16.

450.7.5.4.3 ARROWS, LEGENDS and SYMBOLS (STANDARD SIZE & BIKE LANE SIZE): Arrows, legends and symbols shall be applied in tape as shown on the plans or as requested by the **ENGINEER**.

450.7.5.5 RAISED PAVEMENT MARKER PLACEMENT (RPM): All RPM's shall be secured to the pavement with a hot flexible marker adhesive. Epoxy shall not be used unless approved by the **ENGINEER**.

450.7.5.5.1 PAVEMENT MARKERS (REFLECTIVE): When installing reflective RPM's next to a solid stripe, the RPM shall be placed four inches (4") to the outside or inside the stripe, as specified on the plans.

When installing reflective RPM's between broken lines, the RPM shall be centered in the middle of the twenty-five foot (25') gap.

Raised pavement markers shall be placed so that the reflective face of the marker is facing and perpendicular to traffic.

450.7.5.5.2 PAVEMENT MARKERS (NON-REFLECTIVE):

White "ceramic" non-reflective buttons shall be installed on white stripes and yellow "ceramic" non-reflective buttons shall be installed on yellow stripes. All non-reflective buttons shall be installed according to the striping plans.

450.7.5.6 BARRIER MARKERS FOR, CONCRETE and GUARDRAIL:

450.7.5.6.1 CONCRETE: When installing concrete markers, use Stimsonite No. P/N 965Y for yellow and P/N 965W for white. When called for on the plans.

Placement in the field should be according to ADOT Signing and Marking Standard, Drawing No. 4-M-10.02.

CONTRACTOR is to secure the barrier marker using manufactures specifications.

450.7.5.6.2 GUARDRAIL: When installing guardrail markers use ADOT standards and install them according to ADOT Signing and Marking Standard, Drawing No. 4-M-10.03.

CONTRACTOR is to secure the barrier marker using manufactures specifications.

450.7.6 INSPECTION OF WORK: The **COUNTY** will conduct two field inspections of the pavement markings. The first inspection shall be made after the spot marking is complete. The second inspection shall be made after all markings have been installed.

Inspection and approval of spot markings shall not relieve **CONTRACTOR** from the obligation of obtaining a final inspection.

Final inspection, if it is decided by the **ENGINEER** that more than one coat of paint is required it will be done at the expense of **CONTRACTOR**. If the paint has to be applied in more than one coat, each previous coat shall be thoroughly dry before each new coat is applied.

450.8 METHOD OF MEASUREMENT and BASIS OF PAYMENT:

450.8.1 TRAFFIC PAINT: Painted stripes will be measured by the linear foot along the centerline of the stripe. Skips in dashed lines shall not be included in the measurement.

Painted stripes will be paid for at the contract unit bid price per linear foot COMPLETE-IN-PLACE, including glass beads and surface preparation.

450.8.2 ARROWS, LEGENDS and SYMBOLS (STANDARD & BIKE LANE SIZE): Arrows, Legends and Symbols will be measured by each unit applied.

Arrows, legends and symbols will be paid for at the contact unit bid price per each, COMPLETE-IN-PLACE, including adhesive and surface preparation.

450.8.3 RAISED PAVEMENT MARKERS (REFLECTIVE and NON-REFLECTIVE): Raised Pavement Markers will measured by unit furnished and installed.

Raised Pavement Markers will be paid for at the contract unit bid price per each, COMPLETE-IN-PLACE, including adhesive and surface preparation.

450.8.4 TYPE I - PREFORMED PLASTIC TAPE (CROSSWALKS and STOPBARS): Type I - Preformed Plastic Tape will be measured by the linear foot along the centerline of all lines. All tape quantities will be based on a four inch (4") line or the appropriate multiple of a four inch (4") wide line.

Type I - Preformed Plastic Tape lines for crosswalks and stopbars will be paid for at the contract unit bid price per linear foot COMPLETE-IN-PLACE, including adhesive and surface preparation.

450.8.5 BARRIER MARKERS ON CONCRETE AND GUARDRAIL: Barrier markers on concrete and guardrail will be measured by each contract unit furnished and installed.

Barrier markers on concrete and guardrail will be paid at the unit bid price per each COMPLETE-IN-PLACE, including the adhesive and surface preparation.

SECTION 460 - PAVEMENT MARKING REMOVAL and INCIDENTAL TRAFFIC CONTROL DEVICES:

460.1 STANDARD SPECIFICATIONS: Removal of roadway pavement markings in Maricopa County shall be done according to the requirements of the following documents:

460.1.1 Manual on Uniform Traffic Control Devices for Streets and Highways, latest edition.

460.1.2 Arizona Department of Transportation Standard Specification for Road and Bridge Construction, latest edition.

460.2 INTENT and PURPOSE: These construction specifications are intended to be complementary to above standard specification for REMOVAL OF PAVEMENT MARKINGS AND INCIDENTAL TRAFFIC CONTROL DEVICES in Maricopa County. They are intended to provide a more detailed description and to modify the construction specifications where indicated. In case of discrepancies or conflicts, **CONTRACTOR** shall consult the **ENGINEER**.

460.3 DESCRIPTION OF WORK: **CONTRACTOR** shall furnish experienced supervision and labor, and all materials, equipment, tools, transportation and supplies required to complete the work according to the plans, standard specifications and these construction specifications.

The work under this section shall consist of the removal of all conflicting pavement markings and associated traffic control devices including;

460.3.1 Removal of Traffic Paint.

460.3.2 Removal of Thermoplastic Painted Markings.

460.3.3 Removal of Preformed Pavement Marking Tape Markings.

460.3.4 Removal of Raised Pavement Markers.

460.3.5 Removal of Barrier Markers on bridges, concrete and guardrail.

460.3.6 Any other traffic control devices deemed necessary by the **ENGINEER** for public safety.

460.3.7 Cleaning and preparing the pavement surface according to Section 450 for installation of new pavement markings.

460.4 CONTROL OF WORK: **CONTRACTOR** shall determine the type of pavement markings currently in existence and the appropriate removal methods specified in this Section.

Existing traffic pavement markings shall not be painted over with slurry seal, black paint or stain of any kind.

Any damage caused to the surface of the road by pavement marking removal shall be repaired by **CONTRACTOR** at **CONTRACTOR's** sole expense. The method of repair shall be approved by the **ENGINEER** before the work begins.

460.5 COORDINATION and SEQUENCE OF WORK:

460.5.1 EXTENT OF REMOVAL: **CONTRACTOR** shall be responsible for verifying the striping removal limits of the project before commencement of the work. The striping removal limits may exceed the construction project limits, or new striping limits in order to match existing striping.

Existing pavement markings shall be removed to the fullest extent possible from the pavement by one of the methods identified in this Section, unless another method is approved by the **ENGINEER**.

460.5.2 PREPARATION OF PAVEMENT FOR INSTALLATION OF MARKINGS: Removal of existing pavement marking shall be completed prior to layout and marking of new pavement markings.

460.6 METHODS OF REMOVAL:

460.6.1 TRAFFIC PAINT MARKINGS:

460.6.1.1 SANDBLASTING:

460.6.1.2 TURBO-BLASTER (Steel shot method):

460.6.1.3 CHIP SEAL: When using this method, the entire roadway surface, edge of asphalt to edge of asphalt, shall be covered.

460.6.1.4 ASPHALTIC OVERLAY: The asphaltic overlay thickness and dimensions shall meet Maricopa County Department of Transportation specifications.

460.6.2 THERMOPLASTIC MARKINGS:

460.6.2.1 GRINDING FOLLOWED BY SANDBLASTING:

460.6.2.2 CHIP SEAL: The application of this method depends on the length of time the Thermoplastic Marking has been on the roadway surface. The use a chip seal before grinding\sandblasting is at the discretion of **CONTRACTOR**.

460.6.2.2.1 If the chip seal does not adhere to the existing thermoplastic markings, **CONTRACTOR** shall grind and/or sandblast the thermoplastic markings off and chip seal over the exposed area. All costs for this work shall be borne by **CONTRACTOR**.

460.6.2.2.2 When applying chip seal, the entire roadway surface, edge of asphalt to edge of asphalt, shall be covered.

460.6.2.2.3 Chip seal shall not be applied to a portland cement surface.

460.6.2.3 ASPHALTIC OVERLAY: The asphaltic overlay thickness and dimensions shall meet Maricopa County Department of Transportation specifications.

460.6.3 TYPE I - PREFORMED PLASTIC PAVEMENT MARKING TAPE:

460.6.3.1 GRINDING:

460.6.3.2 CHIP SEAL: The application of this method depends on the length of time the Tape has been on the roadway surface. The use a chip seal before grinding is at the discretion of **CONTRACTOR**.

460.6.3.2.1 If the chip seal does not adhere to the existing Tape Markings, **CONTRACTOR** shall grind off the Tape Markings and chip seal over the exposed area. **CONTRACTOR** shall bear all costs

460.6.3.2.2 When applying chip seal, the entire roadway surface, edge of asphalt to edge of asphalt, shall be covered.

460.6.3.2.3 Chip seal shall not be applied to a portland cement surface.

460.6.3.3 ASPHALTIC OVERLAY: The asphaltic overlay thickness and dimensions shall meet Maricopa County Department of Transportation specifications.

460.6.4 RAISED PAVEMENT MARKERS:

460.6.4.1 HAMMER AND CHISEL:

460.6.4.2 BLADE (HEAVY DUTY EQUIPMENT):

460.6.5 BARRIER MARKERS FOR BRIDGES, CONCRETE and GUARDRAIL:

460.6.5.1 HAMMER AND CHISEL:

460.6.5.2 ANY METHOD APPROVED BY ENGINEER:

460.7 METHOD OF MEASUREMENT and BASIS OF PAYMENT: No measurement or Payment shall be made for removal of existing striping. Removal of existing striping shall be considered incidental work and shall be included in unit bid price for installation of new pavement markings.

SECTION 505 - CONCRETE STRUCTURES: The concrete shall conform to Section 725 and the reinforcing steel shall conform to Section 727 of the Uniform Standard Specifications.

CONCRETE PIPE COLLAR AND CONCRETE PIPE ENCASEMENT:

The work under this section shall consist of furnishing and placing concrete pipe collars and concrete encasements of the sizes and at the locations as called for on the plans.

Collars shall be constructed using Class "A" Concrete in lieu of the Class "B" Concrete called out in MAG Standard Detail 505.

Payment for concrete pipe collars will be made at the unit bid price for each for 24 inches and under CONCRETE PIPE COLLAR, and payment for CONCRETE PIPE ENCASEMENT will be made at the unit bid price for each, which prices shall be full compensation for the items, COMPLETE-IN-PLACE.

CONCRETE CATCH BASIN AND SCUPPERS:

The work under this section consists of constructing cast-in-place concrete catch basins and concrete scuppers at the locations shown on the plans and in accordance with Section 505 of the Uniform Standard Specifications.

The concrete shall conform to Section 725 and the reinforcing steel shall conform to Section 727 of the Uniform Standard Specifications.

CONTRACTOR shall carefully coordinate with the concrete supplier to ensure that concrete having the proper slump arrives at the site. Should it be necessary to add water to adjust the slump, it shall be done in the presence of the Engineer.

Storm drain catch basins will be paid for at the unit price bid for each type of catch basin, as represented by the respective bid item, regardless of dimensional or other differences occurring within a particular type. The unit price to be paid under these items shall be compensation in full for furnishing and placing catch basin structures as shown on the plans and as specified, including concrete, A.C. catch basin aprons, forming, vibrating, finishing, curing, reinforcing steel, forming, vibrating, finishing, curing, access opening frame and cover, embedded angles, grating, anchor bolts, structural steel, excavation, backfill, compaction, and any necessary modifications of the catch basin structures during construction.

Payment for CATCH BASINS and SCUPPERS will be made at the unit bid price per each which price shall be full compensation for the item, COMPLETE-IN-PLACE.

SECTION 601 - TRENCH EXCAVATION, BACKFILLING, AND COMPACTION:

CONTRACTOR shall perform all excavation of every description and of whatever substances encountered, to the depths indicated on the plans and including excavation of compacted backfill for the purpose of making density tests on any portion of the lift. All excavation shall be open cut unless otherwise shown on the plans or approved by the Engineer.

Backfill around existing utilities which are exposed during trench excavation shall be A.B.C. unless specified otherwise. Any shale or similar fractured native rock shall not be used as bedding or backfill adjacent to the installed pipe or appurtenances.

STORM DRAIN PIPE BEDDING:

All storm drain pipe bedding placed under or within 2 feet of new pavement in 35th Avenue and in Broadway Road east of Station 76+00 shall be a cement slurry backfill consisting of one (1) sack of Portland Cement to one (1) cubic yard of A.B.C. The slurry shall be placed at a minimum from the outside bottom of the pipe to one (1) foot over the top of the pipe. The slurry must have a minimum slump of eight (8) inches.

The slurry shall meet a minimum of 25 P.S.I. compressive strength and a maximum of 100 P.S.I., based on a 28-day test.

No compaction will be required for slurry A.B.C. bedding, however, **CONTRACTOR** shall insure that slurry is placed under the pipe haunches.

The cost of such backfill is to be included in the unit price bid per linear foot of installed pipe.

CONTRACTOR shall excavate holes in the backfill materials to the depths and at the locations designated by the Engineer. These holes shall be of such size as to allow the required density testing to be performed in a safe manner as determined by the Engineer. This shall include shoring or any other trench well support measures as required by O.S.H.A.

One (1) sack of Portland Cement to one (1) cubic yard of A.B.C. shall be used in the backfill of all manholes to a minimum of one (1) foot above the top of the adjoining pipes.

All compaction densities, when tested in accordance with ASTM D 698 or AASHTO T99 (Standard Proctor), shall be as follows:

Type I: 100 percent of maximum density for granular material (95 percent for non-granular material) from the surface to two (2) feet below the surface, 95 percent of maximum density from two (2) feet below the surface to the bottom of the trench, including bedding. (This applies to pipe under any existing or proposed pavement, curb, gutter, sidewalk, or such construction included in the contract, or when any part of the trench excavation is within two feet of the above.)

Type II: 90 percent of maximum density from surface to the bottom of the trench, including bedding. (This applies to any pipe within Right-of-Way or Temporary Construction Easements, but outside the limits defined in Type I above.)

Type III: 95 percent of maximum density around any structures or exposed utilities.

No compaction test will be required for slurry A.B.C. bedding.

The location where Type I compaction is required shall be extended to include shoulder areas.

CONTRACTOR, at his option, may excavate a trench having a cross-section with a rounded bottom rather than a flat bottom. If this option is chosen, the trench cross-section must maintain the minimum six (6) inches required between the outside wall of the pipe and the trench wall.

The minimum trench width of the springline for each side of the pipe, as shown in Table 601-1 in Section 601 of the Uniform Standard Specifications, may be reduced to six (6) inches for all pipe sizes where slurry bedding is used.

If **CONTRACTOR** installs raised bell pipe, the initial granular bedding thickness shall be per the Uniform Standard Specifications. If **CONTRACTOR** installs flush bell pipe the initial granular bedding may be reduced to four (4) inches thick. The initial granular bedding shall be select material Type "B" or Aggregate Base as per Table 702 of the Uniform Standard Specifications.

COMPACTION METHODS:

Jetting as a compaction method shall only be permitted if approved, in writing, by the Engineer. This method shall only be allowed to consolidate granular material, select material, and aggregate base course provided that the required density can be obtained with this method. Granular material shall mean material for which the sum of the plasticity index and the percent of material passing the No. 200 sieve shall not exceed 23. Jetting of slurry A.B.C. will not be permitted.

WATER FLOODING AS A COMPACTION METHOD WILL NOT BE ALLOWED.

Where mechanical compaction is used, the backfill material shall be placed in uniform lifts not exceeding a loose thickness of eight (8) inches and compacted uniformly with mechanical work methods approved by the Engineer utilizing equipment such as rollers, pneumatic tamps, hydro-hammers, or other devices which provide the required uniform compaction density, without causing damage to the conduit, pipe, adjacent structures or utilities.

BACKFILL:

Backfill material for all concrete or plastic pipe installations shall have a ph value between 6.0 and 12.0. Tests for ph and resistivity shall be in accordance with the requirements of Arizona test method 236.

No separate payment will be made for trenching, bedding or backfill material and the cost thereof shall be included in the price bid for the items to which they are appurtenant.

SECTION 610 - WATERLINE CONSTRUCTION: All waterline construction, realignment, relocation, or burial, as well as all water service replacement and construction shall conform to the requirements of Section 610 of the Uniform Standard Specifications, the City of Phoenix Supplement to the Uniform Standard Specifications, and these Construction Specifications.

CONTRACTOR shall submit, in writing, to the Engineer the pipe material and the name of the manufacturer for approval prior to ordering any pipe that may be needed for the waterline construction.

Cast iron pipe (CIP) and fittings shall conform to the requirements of Section 750 of the Uniform Standard Specifications.

Ductile iron pipe (DIP) and fittings shall conform to the requirements of Section 750 of the Uniform Standard Specifications.

Asbestos cement pipe (ACP) and fittings shall conform to the requirements of Section 752 of the Uniform Standard Specifications.

Polyvinyl Chloride pipe (PVC) shall conform to AWWA Standard C900. Fittings for polyvinyl chloride pipe shall be ductile iron in accordance with Section 752 of the Uniform Standard Specifications.

Thrust blocks at fittings shall be installed in accordance with Standard Detail No. 380 of the MAG Uniform Standard Details, latest revision.

Anchor blocks at vertical bends shall be installed in accordance with Standard Detail No. 381 of the MAG Uniform Standard Details, latest revisions.

CONTRACTOR shall arrange with the City of Phoenix to have the line shut down in order to perform his work.

Materials for 12 inch waterline construction shall be asbestos cement pipe in accordance with Section 752 of the Uniform Standard Specifications unless otherwise approved by the Engineer.

All waterline and appurtenances shall be pressure tested, flushed and disinfected in accordance with Section 620 and Section 611 of the Uniform Standard Specifications, prior to approval and prior to connecting to existing lines.

The City of Phoenix will close valves - including fire hydrant valves - and otherwise perform water shutdowns necessary for construction of the water facilities. The cost of shutdowns for the convenience of **CONTRACTOR** for other work will be at **CONTRACTOR'S** cost. The City of Phoenix will perform valve cut-ins and wet taps. The cost of this work shall be paid by **CONTRACTOR** which cost shall be included in the unit price bid for appurtenant items.

Payment for 12" diameter Asbestos Cement Pipe and 6" diameter Cast Iron Pipe will be paid at the unit bid price which price shall be full compensation for the item COMPLETE-IN-PLACE, including elbows and bends.

Payment for 12" x 12" Tapping Sleeve and Valve will be made at the unit price bid which price shall be full compensation for the item, COMPLETE-IN-PLACE.

Payment for valves (12 inch and under) will be made at the unit price bid, which price shall be full compensated for the item, COMPLETE-IN-PLACE.

RELOCATION OF FIRE HYDRANT:

Relocation of the two existing fire hydrants at 35th Avenue shall include the removal of the existing fire hydrants and reinstallation to the new locations as shown in the plans or as requested by the Engineer. Any existing hydrant not acceptable for reinstallation, shall be taken to the City of Phoenix Hydrant and Meter Shop at 3045 South 22nd Avenue and exchanged for a rebuilt hydrant. The work of modifying and/or lengthening the existing hydrant extensions shall be the responsibility of **CONTRACTOR**.

New six inch (6") Cast Iron Pipe necessary for fire hydrant relocation will be paid for in accordance with waterline construction as described above.

Payment for relocation of fire hydrant, other than 6" Cast Iron Pipe installation, will be paid at the unit bid price for relocation of FIRE HYDRANT which price shall be full compensation for the work COMPLETE-IN-PLACE.

SECTION 615 - SEWERLINE CONSTRUCTION: All sewerline construction shall conform to the requirements of Section 615 of Uniform Standard Specifications, City of Phoenix Supplement to the Uniform Standard Specifications and these special provisions.

STUBOUT AND PLUG:

The work under this section shall consist of constructing a sewerline stubout and plug of the size and location shown on the plans.

Payment for this item will be made at the contract unit bid price for the item, 8" SEWER STUBOUT AND PLUG, which price shall be full compensation for the item, COMPLETE-IN-PLACE.

SECTION 618 - STORM DRAIN CONSTRUCTION WITH CONCRETE PIPE: All storm drain construction shall be in accordance with the plans, Section 618 of the Uniform Standard Specifications and these Construction Specifications.

Reinforced Concrete Pipe shall be Rubber Gasket Reinforced Concrete Pipe of the Class specified in the plans. Where indicated in the plans, Cast-In-Place Concrete Pipe may be used as an alternative, in which case construction will be in accordance with the plans, Section 620 of the Uniform Standard Specifications, and these Construction Specifications.

Prior to the manufacture of the pipe, **CONTRACTOR** shall submit material and layout drawings to the Engineer.

Submittal shall show layout, stationing, laying length of all pipe, D-load thickness, detailed drawings of any pipe used to construct a curve and other pertinent data. Fabrication drawings shall be submitted for concrete pipe. Catch basin connector pipe need not be included in the pipe layout. However, pipe stubs shall be included. In lieu of including

catch basin connector pipe in the pipe layout, a list of catch basin connector pipe shall accompany the layout.

The connector pipe list shall contain the following information: inside diameter and D-load rating, station at which pipe joins trunk line, number of sections of pipe, and laying length of sections.

Along 43rd Avenue **CONTRACTOR** shall construct and maintain any bypass ditches necessary to convey drainage to the river from the Salt River Project water facilities. No direct payment will be made for this work.

SECTION 623 - HEADWALL: The work under this section shall consist of constructing headwalls and installing access barriers of the types and at the locations shown on the plans.

All headwalls, including headwall footings shall be constructed using reinforced concrete.

Steel reinforcement shall conform to Section 727 of the Uniform Standard Specifications.

Portland Cement Concrete shall conform to Section 725 of the Uniform Standard Specifications.

Payment for **HEADWALLS** and **ACCESS BARRIERS** will be made at the unit bid price per each, which price shall be full compensation for the items, **COMPLETE-IN-PLACE**.

Work under this section shall also include installation of Storm Drain Access Barriers in accordance with the Plans, Uniform Standard Specifications and these Construction Specifications. The Phoenix Standard Detail P-1563 and P-1562 is modified to provide barriers of the size shown in the plans and bidding schedule.

Payment for Access Barriers of various sizes will be paid at the unit price for the item, which price shall be full compensation for the item, **COMPLETE-IN-PLACE**.

SECTION 624 - IRRIGATION LINE CONSTRUCTION: All irrigation line construction shall conform to the plans and the requirements of Section 618 of Uniform Standard Specifications and these Construction Specifications. It shall include the connection of the line to the Salt River Project Stubout. If a pipe collar is required to tie to the SRP system the payment for this collar will be made in accordance with Section 505 of these Construction Specifications. The new irrigation line pipe shall be plugged at its southern terminus. The cost of the plug at this location and the cost of the 45 degree pipe bend shown in the plans are not pay items and the cost thereof shall be included in the cost of irrigation line installation.

Construction of the irrigation valves shall include the installation of pipe connectors to the line and concrete scouring basins.

Payment for **IRRIGATION VALVES WITH CONCRETE SCOURING BASIN** will be made at the unit bid price, which price shall be full compensation for the item, **COMPLETE- IN-PLACE**.

Work included in this section shall also include the installation of Automatic Drainage Gates of the types and sizes and at the locations as specified in the plans and bidding schedule. Aluminum gates will not be allowed.

Payment for Automatic Drainage Gates will be made at the unit bid price of the item, which price shall be full compensation for the item, COMPLETE-IN-PLACE.

SECTION 625 - MANHOLE CONSTRUCTION: Work under this item shall include the construction of manholes for storm drain and sewer construction in accordance with this plans, the City of Phoenix Supplement to the Uniform Standard Specifications, the Uniform Standard Specifications and these Construction Specifications.

CONTRACTOR is advised that the MAG Standard Detail 425-24-inch Aluminum Manhole Frame and Cover is not approved for this project.

Payment of storm drain and sewer manholes will be made at the unit bid price per each for the item regardless of dimensional or other differences occurring with in a particular type, which price shall be full compensation for the item, COMPLETE-IN-PLACE.

SECTION 631 - ABANDON WELL: CONTRACTOR through a licensed well driller shall abandon the existing well located on the west side of 43rd Avenue. The existing pump and pump piping shall be removed and delivered to Mr. Pablo Garcia, owner of the adjacent property. Location of placement of the pump parts shall be coordinated with Mr. Garcia.

CONTRACTOR shall pull the ten (10) inch inside diameter well casing and install twenty (20) feet deep cement grout plug inside well. The top of the plug shall be a minimum of eight (8) feet below finished grade. A 3' x 3' x 8" Concrete Cap shall be installed at the top of the grout.

The well abandonment shall be in accordance with ADWR (Arizona Department of Water Resources) requirements, and **CONTRACTOR** shall file required reports with ADWR.

Payment for the item will be made at the unit bid price for Item 631 - ABANDON WELL, which price shall be full compensation for the item, COMPLETE-IN-PLACE.

SECTION 635 - CONCRETE DITCH LINING: This item shall consist of furnishing all material, labor and equipment necessary to construct pneumatically placed mortar ditch lining or as an alternative, a hand placed concrete ditch lining to the cross-section, lines, grades and locations as shown on the plans and details, the Uniform Standard Specifications and these Construction Specifications. Pneumatically placed mortar lining shall be constructed by the wet process in accordance with Section 525 of the Uniform Standard Specifications. Hand placed concrete lining shall be constructed in accordance with this specification. Steel reinforcement in the form of welded wire fabric is required for pneumatically placed mortar and hand placed concrete lining .

In preparation of the area for installation of the concrete lining ditch and prior to the excavation for the ditch, all earth fills, embankments and natural earth shall be constructed to the cross-section and grade shown on the plans or as requested by the Engineer.

The earth material for the construction of the ditch site may be from the adjacent area, if approved by the Engineer, or from agricultural soils within the project area. The intent being that soils used for the ditch on which the lining is placed have sufficient silt and clay to retain shape when formed and compacted. The natural earth found in place or any imported embankment material shall be compacted at optimum moisture content and by mechanical methods that will secure the required density of 90 percent of the maximum density for the material. The maximum density for the material shall be determined on the basis of laboratory compaction tests made in accordance with AASHTO Designation T-99, Method A and T-191 or ASTM D-2992 and D-3017 with the percent of density adjusted in accordance with the rock correction procedure for maximum density determination, standard detail, to compensate for the rock content larger than that which will pass a No. 4 sieve.

The depth of the compaction required will be to six (6) inches below the surface on which the lining is to be placed. The surface against which the lining is to be placed shall be compacted and accurately finished to the grades and dimensions shown on the plans.

Excess material removed in excavation of the ditch shall be used to strengthen the embankment on the side closest to the right-of-way if the ditch on that side is above natural ground. Otherwise the excavated material is to be removed from the site. Excavation is contained in the subgrade preparation of the project and is **not** a separate pay item.

For hand placed concrete lining the finished surface of the concrete shall be free from rock pockets or surface voids and shall be comparable to the finish obtained by use of a long handled steel trowel.

Hand placed concrete shall be mixed in such proportions that the 28-day strength has a minimum of 2000 psi with cement content of not less than 4.5 sacks per cubic yard of concrete. Cement for concrete shall be Type II, low alkali, in accordance with Federal Specification SS-C-192. The slump of the concrete shall not exceed 4 inches. **CONTRACTOR** shall use an air entraining agent in the concrete, which shall be one of those permitted under ASTM Designation C-175. The amount of air entraining agent used shall be such as will effect the entrainment of from 4% to 6% of air, by volume, of the concrete at the jobsite.

The coarse aggregate shall pass through a screen having 3/4 inch square openings, and shall be reasonably well graded from 3/16 inch to 3/4 inch. Screens having openings of other sizes and shapes may be used, if equivalent results, as determined by the Engineer, are obtained.

The sand particles shall be hard, dense, durable uncoated rock fragments that will pass a screen having 1/4 inch square openings. The sand shall be well graded from fine to coarse, and shall be free from injurious amounts of dirt, organic matter and other deleterious substances.

Transverse grooves five-sixteenths of an inch (5/16") in width and five-eighths of an inch (5/8") in depth shall be made in the concrete lining at intervals of ten feet (10') and maintained to the required dimensions until the concrete has hardened.

Payment for this item will be made at the contract unit bid prices for Ditch lining with WELDED WIRE FABRIC, which price shall be full compensation for the item, COMPLETE-IN- PLACE.

SECTION 710.2.5 - JOB MIX FORMULA: Add the following to this section:

The following job mix formula shall apply for Modified MAG D-1/2 Mix Designation:

<u>SIEVE SIZE</u>	<u>PERCENT PASSING</u>	<u>JOB MIX TOLERANCE</u>
1"	100
3/4"	97-100	-----
1/2"	88	+/- 7%
3/8"	78	+/- 7%
#4	58	+/- 7%
#8	45	+/- 5%
#30	25	+/- 5%
#200	5	+/- 2%

Percent Asphalt Cement: 4.9 +/- 0.4%
Asphalt Cement: AR-4000 or AC-20
Temperature: Mixing and Placing 280 F +/- 25 F

Type II Portland Cement or equal will be added by dry weight of the mineral aggregate, 1.5%.

Gradation above shall supersede that in Section 710.3.

SECTION 710.7 - BATCH MIXING: Add the following paragraph to Subsection 710.7.5 Mixing:

If the results obtained indicate that uniform proportions of the aggregate from the bins or uniform and correct amounts of asphalt are not being delivered, the Engineer shall order that operations cease until proper corrections have been made.

GENERAL COMMENTS:

The **COUNTY** reserves the right to adjust design grades or the location of the drainage structures, driveways and similar items prior to construction, if determined necessary by the Engineer, without additional cost to Maricopa County.

The cost of all work required under this contract, as shown on the plans, for which there are no specific items on the Bidding Schedule, shall be included in the bid price for related items.

ENERGIZED POWER LINE WARNING:

NOTE: Salt River Project (SRP) maintains energized aerial electrical power lines in the immediate vicinity of this project. **CONTRACTOR** shall not consider these lines to be insulated. Construction personnel working in proximity to these lines are exposed to an extreme hazard from electrical shock. **CONTRACTORS**, their employees, and all other construction personnel working on this project must be warned of the danger and instructed to take adequate protective measures, including maintaining a minimum ten (10) foot clearance between the lines and all construction equipment and personnel (see OSHA Std. 1926.55 (a) 15). As an additional safety precaution, **CONTRACTORS**, shall call SRP at 236-6136 to make arrangements to have these lines de-energized or relocated when the work reaches their immediate vicinity. The cost of such temporary arrangements shall be borne by **CONTRACTOR**. SRP can often respond to such requests if two (2) days advance notice is given, but may require up to sixty (60) days notification.

CONSTRUCTION CLEARANCE AGREEMENT

This CONSTRUCTION CLEARANCE AGREEMENT is made by and between _____ ("CONTRACTOR") and the SALT RIVER PROJECT AGRICULTURAL IMPROVEMENT AND POWER DISTRICT ("SRP"), an agricultural improvement district organized and existing under the laws of the State of Arizona.

The dates and times for the clearance period are from _____, 19__ at __:00 __. M. through _____, 19__ at __:00 __. M. for the SRP irrigation facilities located at _____

The CONTRACTOR, having read both sides of this Construction Clearance Agreement, understands and agrees to all the terms and conditions contained herein.

Authorized CONTRACTOR Representative Date

Office Phone No.: _____ Emergency Phone No.: _____

SRP Date

SRP Watermaster's phone number: 236- _____ Mobile: _____

SRP Inspector's phone number: 236- _____ Mobile: _____

SRP emergency phone number: 236-5296

TERMS AND CONDITIONS

1. The CONTRACTOR warrants that it has the equipment, manpower and materials necessary to complete the work identified above and shall restore the affected SRP irrigation system to full operational condition during the clearance period. Time is of the essence.
2. Should the CONTRACTOR not complete the above work during the clearance period or should this Construction Clearance Agreement be terminated in accordance with Section 3 below, the CONTRACTOR, upon demand, shall pay SRP for all costs and expenses incurred in completing the work and/or restoring the irrigation facilities to full operational condition and for all direct and indirect damages incurred by SRP.
3. The CONTRACTOR shall comply with all applicable federal, state, and local laws, rules, regulations, and ordinances *including, but not limited to, OSHA 29 CFR 1910.146 "Permit Required Confined Spaces", and OSHA 29 CFR 1910.147 "The Control of Hazardous Energy (Lockout/Tagout)"*, for any work inside irrigation pipelines, structures or other confined spaces as defined by the OSHA regulations. Failure to adhere to these laws, rules, regulations and ordinances will be sufficient grounds for SRP to terminate this Construction Clearance Agreement and subject CONTRACTOR, upon demand, to pay SRP for all costs as specified above.
4. It is the CONTRACTOR's responsibility to contact the SRP Watermaster and arrange for any further clearance time necessary to complete this project. The CONTRACTOR agrees that a dryup of SRP's facilities may take several weeks to schedule and may be impractical due to seasonal demands during certain times of the year. Any additional clearance time will be granted at the Watermaster's sole discretion. It is the CONTRACTOR's responsibility to protect the job site from water that may leak through SRP gates or from storm water and nuisance water that may enter the system uncontrolled, and CONTRACTOR shall relieve SRP for any such responsibility.

NOTE: THIS CONSTRUCTION CLEARANCE AGREEMENT DOES NOT GUARANTEE DRY CONDITIONS.

5. The CONTRACTOR shall release the United States of America ("USA"), the Salt River Valley Water Users' Association ("SRVWUA") and SRP from any damages, actions, costs, liabilities, and expenses, including attorneys' fees, arising from any delay by the USA, SRVWUA, or SRP in permitting the CONTRACTOR, or any of its contractors or subcontractors of any tier to perform any work required or permitted under this Construction Clearance Agreement or arising from the SRP's or the SRVWUA's failure to schedule a dry-up when requested. The CONTRACTOR shall indemnify, defend, and hold harmless the USA, SRVWUA, and SRP, and members of their governing bodies, directors, officers, employees, or agents from and against all damages, actions, costs, liabilities, and expenses, including attorneys' fees, arising out of any act, omission, or negligence of the CONTRACTOR or of any of its contractors or subcontractors of any tier.
6. Upon prior written approval from the SRP Watermaster, the CONTRACTOR may be allowed to supply alternative water deliveries to affected SRP customers.
7. Prior to any employee of the CONTRACTOR or of its contractors, or subcontractors of any tier entering any pipeline or structure that is in any way tied to the SRP irrigation system, the CONTRACTOR shall notify the SRP Watermaster of the time and location with as much prior notification as possible before the employee enters the facility.
8. The CONTRACTOR shall dispose of all materials removed from the site that are associated with the construction or modification of SRP's irrigation facilities in an SRP APPROVED LANDFILL.
9. This Construction Clearance Agreement constitutes the complete and entire agreement between the parties and supersedes any previous communications, representations, or agreements, whether verbal or written, with respect to the subject matter hereof. No change, addition, or modification shall be binding upon SRP unless in writing and signed by SRP. This Construction Clearance Agreement shall be governed by and construed under the laws of the State of Arizona.
10. The CONTRACTOR acknowledges that SRP, as required by OSHA 29 CFR 1910.146 (c)(8)(iii), has apprised the CONTRACTOR of the precautions and procedures that SRP has implemented for the protection of employees in or near permit spaces where CONTRACTOR personnel will be working.

GENERAL SITE REGULATIONS

1. SITE RESPONSIBILITY

- 1.1 **CONTRACTOR** and its subcontractors and their respective employees, agents, and representatives, when performing the work described in the Construction Specifications, shall comply with all rules and regulations set forth by the **COUNTY**, pertaining to the safety, loss control and shall perform the work in compliance with governmental laws and regulations pertaining to occupational health, and environmental protection, including any local sound control and noise level rules, regulations and ordinances which apply to any work performed pursuant to the contract..
- 1.2 **CONTRACTOR** is solely responsible for jobsite ("site") conditions during all phases of construction, beginning with **CONTRACTOR's** mobilization of equipment and/or personnel until the work has been accepted by the engineer and a certificate of completion has been issued by the **COUNTY**. **CONTRACTOR's** responsibility for the site during the period specified above, shall not be limited to **CONTRACTOR'S** working hours and shall include but not necessarily be limited to the following:
- * Physical condition of the site;
 - * Safety of **CONTRACTOR's** personnel at the site and all other persons entering the site or areas adjacent to the site;
 - * Security of **CONTRACTOR's** equipment and material; and
 - * Reasonable aesthetic appearance of the site.
- 1.3 **CONTRACTOR** shall insure that internal combustion equipment is operated with a muffler of a type recommended by the manufacturer.

2. COOPERATION WITH UTILITIES

- 2.1 **CONTRACTOR** is solely responsible for any damage to existing utilities resulting from **CONTRACTOR's** operations at the site.
- 2.2 An attempt has been made by the **COUNTY** to identify the location of all underground utilities located within the perimeter of the site and to design the location and elevation of all irrigation and drainage pipes, culverts and structures to avoid interference with existing utilities. It shall be the **CONTRACTOR's** responsibility to cooperate with the appropriate utility companies in order to facilitate requested adjustments of obstructing utilities. (Please refer to the Construction Specifications for specific telephone numbers and contact persons of utilities within the project area.)
- 2.3 **CONTRACTOR's** installation of conduits, brackets, piping or other material at the request and for the convenience of the utility, shall be paid by the utility unless specifically identified otherwise in the plans or the Construction

Specifications. **CONTRACTOR** shall make all required arrangements for such construction and payment with the utility. The **COUNTY** will not extend the performance period of the contract to accommodate construction performed for the convenience of the utility.

3. **REMOVAL OF EXISTING IMPROVEMENTS**

3.1 If the work specified in the Construction Specifications requires the removal of existing improvements by the **CONTRACTOR**, **CONTRACTOR** shall perform such removal in a safe manner avoiding damage to improvements not designated for removal and dispose of all construction debris in a manner and in a location approved by the engineer. **CONTRACTOR** shall refer to Section 350 of the Construction Specifications for specific information.

4. **BORROW MATERIAL**

If the use of borrow material is required during the performance of the work outlined in the Construction Specifications, **CONTRACTOR** shall assure that the borrow material used for the project, if the source is other than that recommended by the **COUNTY**, does not contain any substances which may be harmful to humans, animals, vegetation, ground and surface water, and the environment and which are regulated under the Hazardous Material Transportation Act, the Toxic Substances Control Act, the Resource Conservation and Recovery Act (RCRA), and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

5. **TRANSPORTATION OF CONSTRUCTION MATERIAL**

CONTRACTOR shall cover dump trucks while transporting materials which may become airborne during transit. After dumping of such materials, **CONTRACTOR** shall either cover truck bed or take measures to remove all residues that may become airborne.

6. **OFF-SITE TRACKING OF SEDIMENTS**

CONTRACTOR shall minimize off-site tracking of sediments by brushing or blowing off construction vehicles, or any other method deemed appropriate by **CONTRACTOR**, prior to exiting the construction site.

7. **HAZARDOUS MATERIAL HANDLING**

7.1 **CONTRACTOR** shall furnish to the **COUNTY** Material Safety Data Sheets (MSDS) for all regulated and/or hazardous substances which **CONTRACTOR** plans to bring to the site and which may be harmful to humans, animals, vegetation, ground and surface water and the environment and which are regulated under the Hazardous Material

Transportation Act, the Toxic Substances Control Act, the Resources Conservation and Recovery Act, and the Comprehensive Environmental Response, Compensation, and Liability Act.

7.2 **CONTRACTOR** shall further furnish to the **COUNTY** prior to the start date of the work a list of all regulated and/or hazardous materials, identified above, which **CONTRACTOR** intends to bring to the site. The list shall contain the following information:

- * Quantity of material
- * Description of material
- * Intended use of the material.

Additionally, **CONTRACTOR** shall furnish the **COUNTY** with Material Safety Data Sheets for all regulated and/or hazardous substances **CONTRACTOR** plans to bring to the site or use during the performance of the work.

CONTRACTOR shall immediately report spills of oil, gasoline, diesel, lubricants, chemicals and other hazardous material or regulated substances to the **COUNTY** and to all federal, state and local agencies having jurisdiction. Accidental spills shall be immediately contained, the spilled material and contaminated soil removed in accordance with the guidelines established on the Material Safety Data Sheets and in accordance with all applicable federal, state and local laws, mandates, regulations and ordinances. After completion of the clean-up activities, **CONTRACTOR** shall restore the spill area to preexisting conditions.

7.3 The **COUNTY** will make reasonable effort to locate and identify potentially hazardous materials and/or underground storage tanks within the project area, prior to construction. In the event material is found by **CONTRACTOR** or subcontractors of any tier, during the performance of the work, that is suspected to be hazardous, **CONTRACTOR** shall follow the following procedure:

1. Call '911' in a life threatening situation.
2. Stop work at the affected area and remove all personnel from that area.
3. Barricade the area and provide traffic control to prohibit unauthorized entry.
4. Notify the MCDOT Safety Office (506-8601) and the Engineer.
5. Notify the appropriate regulatory agency(ies) and emergency services.

The Engineer, in consultation with the appropriate regulatory agencies and emergency services, will determine the necessary remediation plan for the Site.

Remediation activities shall only be performed by a certified hazardous waste disposal remediation company, approved by the **COUNTY**.

8. SITE CLEAN-UP

CONTRACTOR shall be responsible for the safe and clean condition of the site during the entire period the site is under **CONTRACTOR'S** care, custody and control. **CONTRACTOR** shall dispose of construction debris on an as-needed basis in order to keep the site safe to **CONTRACTOR'S** personnel and the general public. Construction debris shall be disposed of only in a manner or in a location approved by the Engineer.

9. WATER, LIGHT, POWER, HEAT, AND TELEPHONES

All water for **CONTRACTOR'S** own use, drinking water, temporary electric power, heat, and telephone service shall be arranged for or provided by **CONTRACTOR**, at **CONTRACTOR'S** sole expense.

10. EXCAVATION OF DISPOSAL SITES

10.1 CONTRACTOR shall contact the Maricopa County Flood Control District at 506-1501 for sources of sand, gravel or borrow material or to obtain information on the location of disposal sites for excess material to assure that the selected disposal site is not in conflict with any Flood Control District project or located in a floodplain.

10.2 CONTRACTOR shall obtain and submit to the **ENGINEER** during the pre-construction conference a copy of the response from Maricopa County's Flood Control District or the municipal floodplain manager having jurisdiction over the proposed excavation or disposal site or shall furnish to the engineer a floodplain use permit.

11. TRAFFIC CONTROL (SECTION 401)

11.1 All traffic control shall conform to the Construction Specifications for this project and the request of the **ENGINEER**. Part IV of the "Manual On Uniform Traffic Control Devices For Streets And Highways" (U.S. Department of Transportation, Federal Highway Division) and all revisions thereto, the Traffic Manual from the City of Phoenix and all revisions thereto shall serve as a guideline in **CONTRACTOR'S** application of traffic control.

11.2 It shall be **CONTRACTOR's** responsibility to provide, erect and maintain and remove after completion of the work all necessary signs, barricades, barriers, berms, lights, high level warning devices, delineators, and any other required devices, uniformed officers, and flagman, necessary to properly mark and control the construction area for the safe and efficient movement of traffic. Temporary traffic control devices shall be installed prior to the start of any work. It shall be **CONTRACTOR's** responsibility to construct the required by pass lanes in order to make road available to traffic. The **COUNTY's** approval of **CONTRACTOR's** traffic control method shall not relieve **CONTRACTOR** of its responsibility to protect the work, **CONTRACTOR's** personnel, or the general public.

11.3 **CONTRACTOR** shall provide and maintain all necessary signs, barricades and centerline vertical panels for five (5) working days beyond the concrete cure time or acceptance of the project by the **COUNTY**, whichever period is greater.

12. TRAFFIC REGULATIONS (SECTION 401.5)

12.1 A road closure for the convenience of **CONTRACTOR** is not authorized, without the prior approval of the **COUNTY**. Traffic restrictions are not permitted on major or collector streets during peak traffic hours of 6:00 a.m. to 8:30 a.m. and 4:00 to 7:00 p.m. weekdays.

12.2 At signalized intersections during peak hours, four lanes shall be open on roads with five or more lanes, and three lanes shall be open on roads with four or less lanes with the center lane a left turn lane. During off-peak traffic hours, the minimum number of lanes shall be two lanes (one in each direction) on streets with four lanes or less, and three lanes on streets with five or more lanes.

12.3 Channelization, including "KEEP RIGHT" signs, shall be provided whenever traffic is moved across the street center line, the existing center line is removed or opposing traffic is maintained in other than the normal traffic lanes.

12.4 All temporary traffic control devices shall be ballasted with sandbags or other approved ballast.

12.5 For construction or trenching diversions that require movement of traffic from the normal through lanes, temporary bypasses shall be utilized only during daylight hours and the normal traffic shall be restored during nighttime hours. Traffic plates and temporary pavement shall be used to restore traffic lanes. Exceptions may be authorized by the **ENGINEER** under unusual conditions.

- 12.6 The "SPEED LIMIT 25" sign shall be used where traffic is maintained on unpaved shoulders, on temporary detour roads, on road sections where the existing pavement has been removed, or on traffic lanes that are severely restricted.
- 12.7 Access to all adjacent properties shall be maintained whenever possible. When access cannot be maintained, **CONTRACTOR** shall notify the adjacent residents at least 48 hours in advance of the access closure. In no case shall the access be closed for more than four hours. Access for fire stations, hospitals, sheriff stations and schools shall be maintained at all times.
- 12.8 In order to keep nighttime noise to acceptable levels, no work shall be conducted during the hours of 7:00 P.M. to 6:00 A.M. Exceptions may be granted by the **ENGINEER**. Special noise abatement procedures shall be implemented by **CONTRACTOR** for nighttime work.
- 12.9 **CONTRACTOR** shall maintain or relocate all existing signal indications, warning signs, STOP, YIELD, and street name signs erect, clean and in full view of the intended traffic at all times. Portable signs should be used to supplement blocked or removed signs. **CONTRACTOR** shall reset all disturbed signs to permanent locations when construction is completed. Unnecessary or surplus signs shall be removed and delivered to the MCDOT warehouse at 2222 South 27th Avenue. **CONTRACTOR** is responsible for the cost of replacing lost or damaged traffic warning signs.
- 12.10 If existing signal equipment is damaged as a result of **CONTRACTOR'S** construction activity, **CONTRACTOR** shall notify the Traffic Engineering Division of the **COUNTY** at (602) 506-8660, in order to facilitate the prompt restoration of the traffic signal operation. All costs associated with the repair of damaged traffic signals, caused by **CONTRACTOR'S** construction activity, shall be borne by **CONTRACTOR**.
- 12.11 **CONTRACTOR** shall erect portable jersey barriers when deemed necessary by the **ENGINEER**. The approach ends of all portable barriers shall be flared a minimum of ten feet away from the travel lane in order to lessen the severity of an accidental impact.
- 12.12 Rope, flagging, fencing and woven plastic tape may be used between barricades and channeling devices to provide additional safety.
- 12.13 **CONTRACTOR** shall install deceleration sand berms in the blocked traffic path or at other hazardous sites, if required by the **ENGINEER**, in order to prevent vehicles from entering the construction and/or hazard area. The deceleration sand berms shall be constructed of washed sand and shall be approximately five feet (5') high.

12.14 CONTRACTOR shall refer to Section 401.5.1, Traffic Control, of the Construction Specifications for specific traffic control requirements for this project.

12.15 PAYMENT (SECTION 401.7)

Payment for traffic control shall be made on a lump sum basis for Item 401, Traffic Control, which shall be full compensation for the work, including labor, materials, traffic control devices, and miscellaneous incidental items necessary to complete the work.

13. NPDES CONSTRUCTION PERMIT REQUIREMENTS

If the **COUNTY** designates this project to be subject to the National Pollutant Discharge Elimination System (NPDES) stormwater requirements for construction sites under the Environmental Protection Agency (EPA) General Permit for Arizona, **CONTRACTOR** shall comply with the following provisions:

13.1 Under the provisions of the EPA General Permit for Arizona, **CONTRACTOR** shall be designated as permittee, and shall take all necessary measures to assure compliance with the NPDES General Permit for Arizona as well as all other applicable federal, state and local laws, ordinances, statues, rules and regulations pertaining to stormwater discharge. As the permittee, **CONTRACTOR** is responsible for preparing, in a manner acceptable to the EPA, all documents required by this regulation, which shall include but not necessarily be limited to the following:

13.1.1 Stormwater Pollution Prevention Plan (SWPPP) for the project, including Certification of Compliance form. **CONTRACTOR** shall be required to develop, implement, update and revise the SWPPP, as necessary, in order to assure compliance with the EPA permit requirements. The SWPPP shall be retained on the project site at all times during construction.

13.1.2 Notice of Intent (NOI) to assure compliance with the NPDES General Permit for Arizona, including certification of signatures.

13.1.3 Notice of Termination (NOT) of coverage under the NPDES General Permit for Arizona.

13.2 Preliminary copies of the NOI and the SWPPP shall be submitted to the **COUNTY** during the pre-construction conference and shall be subject to review by the **COUNTY** prior to implementation.

- 13.3 CONTRACTOR** shall submit the completed and duly signed NOI forms no later than forty-eight (48) hours prior to the initial start of construction on the project to the following agencies:

**EPA STORMWATER NOTICE OF INTENT
P.O. BOX 1215
NEWINGTON, VA 22122**

A copy of the completed NOI form shall be submitted to the following address:

**STORMWATER COORDINATOR
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
P.O. BOX 600
PHOENIX, AZ 85001-0600**

(Local municipality, as applicable, where construction project is located)

- 13.4** Failure by **CONTRACTOR** or subcontractor of any tier to submit NOIs within the mandated time frame shall result in delay of the construction start date and no claims for extension of time will be granted for such a delay. A copy of the completed NOI shall be posted at the construction site.
- 13.5** **CONTRACTOR** shall perform inspections of all stormwater pollution control devices on the project on a monthly basis or following a rainfall of .50 inches or more during a 24 hour period at the project site, as required under the provisions of the NPDES General Permit for Arizona. **CONTRACTOR** shall prepare reports on such inspections and shall retain the reports for a period of three (3) years following the completion of the project. Inspection reports shall be submitted monthly to the **COUNTY** along with progress payment requests. Additionally, **CONTRACTOR** shall maintain all stormwater pollution control devices on the project in proper working order, which shall include cleaning and/or repair during the duration of the project.
- 13.6** **CONTRACTOR** shall use its best effort to assure that its employees and subcontractors of any tier and their employees shall at all times comply with all applicable laws, ordinances, statutes, rules and regulations set forth by all federal, state and local governments and the Environmental Protection Agency in connection with the NPDES Construction Permit requirements and laws and regulations pertaining to air, ground water and surface water quality.
- 13.7** Fines and penalties imposed by the EPA for **CONTRACTOR'S** failure to comply with any or all of the requirements of the NPDES General Permit for Arizona, shall be borne by **CONTRACTOR**.

- 13.8 Upon project completion, acceptance and demobilization, **CONTRACTOR** shall submit its completed, duly executed NOT form to the EPA at the address listed above, with a copy to the Arizona Department of Environmental Quality and the appropriate municipality, thereby mating all NPDES permit coverage for the project. **CONTRACTOR** shall then surrender to the **COUNTY** copies of the SWPPP, inspection information and all other documents prepared and maintained by **CONTRACTOR** in compliance with the NPDES General Permit. **CONTRACTOR** shall retain the originals of such documents for a period of three (3) years following the completion of the project and make such documents available for inspection by representatives of the Environmental Protection Agency, the Arizona Department of Environmental Quality, the **COUNTY** or municipality having jurisdiction, upon request.
- 13.9 The lump sum price for the SWPPP shall include all material, labor, and all other costs relating to the preparation, installation and maintenance of the SWPPP during project construction, including assuring proper operation of the pollution control devices installed, and all maintenance, cleaning, and disposal costs associated with clean-up and repair following storm events, runoff or releases on the project. The lump sum price for the SWPPP shall be inclusive of all costs, and no additional claims shall be made by **CONTRACTOR** under any other specification provision of these documents, including change conditions. **CONTRACTOR** shall be compensated for this bid item at a rate of 25% of the total bid item with the first progress payment, with the remaining 75% of the total bid item prorated over the entire length of the project.
- 13.10 Copies of all required forms and guidance for preparing the SWPPP are available in the "Drainage Design Manual For Maricopa County, Volume HI Erosion Control". The manual is available at the Flood Control District, 2801 West Durango, Phoenix, Arizona 85009.

(END GENERAL SITE REGULATIONS)

Hand delivered 10/21/94
Rec. *A*

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION

ENGINEERING DIVISION

MEMORANDUM

DATE: October 21, 1994

TO: Amir Motamedi, Flood Control District of Maricopa County

FROM: Tom Phelan *TP* Project Management Engineer

SUBJECT: Broadway Road - 43rd Avenue to 35th Avenue - MCDOT Project No. 68237

Attached please find one (1) copy each of full size and reduced size final plans of the above referenced project. Also attached are the Final Special Provisions for this project. The project has been bid and permission to award a construction contract to the low bidder has been requested of the Board of Supervisors for action on November 2, 1994. We anticipate that construction will begin on or about December 1, 1994.

The project will construct three (3) drains to the Salt River at the south side bank. Two (2) of the drains are located within the City of Phoenix. We are constructing the drains within the City under an intergovernmental agreement with the City. They have copies of our plans.

The drain at the 43rd Avenue alignment is within the unincorporated area. You will notice that physical construction is within an existing dirt drainage ditch at this location and within an Salt River Project easement. This existing drainage facility carried agricultural drainage and some rainfall runoff for many years and will continue to do so. We will convey that drainage by pipe culvert and will include some roadside drainage. Maintenance of this facility will be by Maricopa County under an agreement with Salt River Project.

The Special Provisions require the Contractor to comply with NPDES requirements during construction. Please insure that following construction our combined agricultural /street drainage discharge will be in compliance with NPDES requirements. If you would like to see our Consultant's drainage report please contact me at 506-4662. Thank you.

Copies: Barry Nauseda
Mike Dawson

Broadway Extension
35th to 43rd

10,21,94 * Was delivered Memo, Report, reduced plans and full size plans

10,24,94 * 1^{pm}: Talked to EAR, Since its too late to review, he won't need it now. However would like to take a look at it later.

10,24,94 * Talked to DRJ, Dave said FPM should look at it if within Floodplain.

* SRY and AMM check FEMA FIRM, without scaling, it doesn't seem to be within FPM, however will ask CWR to check later.

2 PM * Took letter to Catsby Moore. According to
10,24,94 CWM, since County does not have permitting authority, we should not review. She called Tom Phalen while I was at her office. ~~saying~~ Tom being out left a message saying we cannot review. CWR told me she will be out till Monday, VAR will substitute if questions arise.

3 PM * Tom Phalen called. Everything O.k. No need for
10,24,94 District to Review. Asked that we send back full size prints.

over →

- Talked w/ Cathy Reester. She informs me that there appears to be a problem w/ Baker Study @ that location, she does not think this project will impact Bakers floodplain.

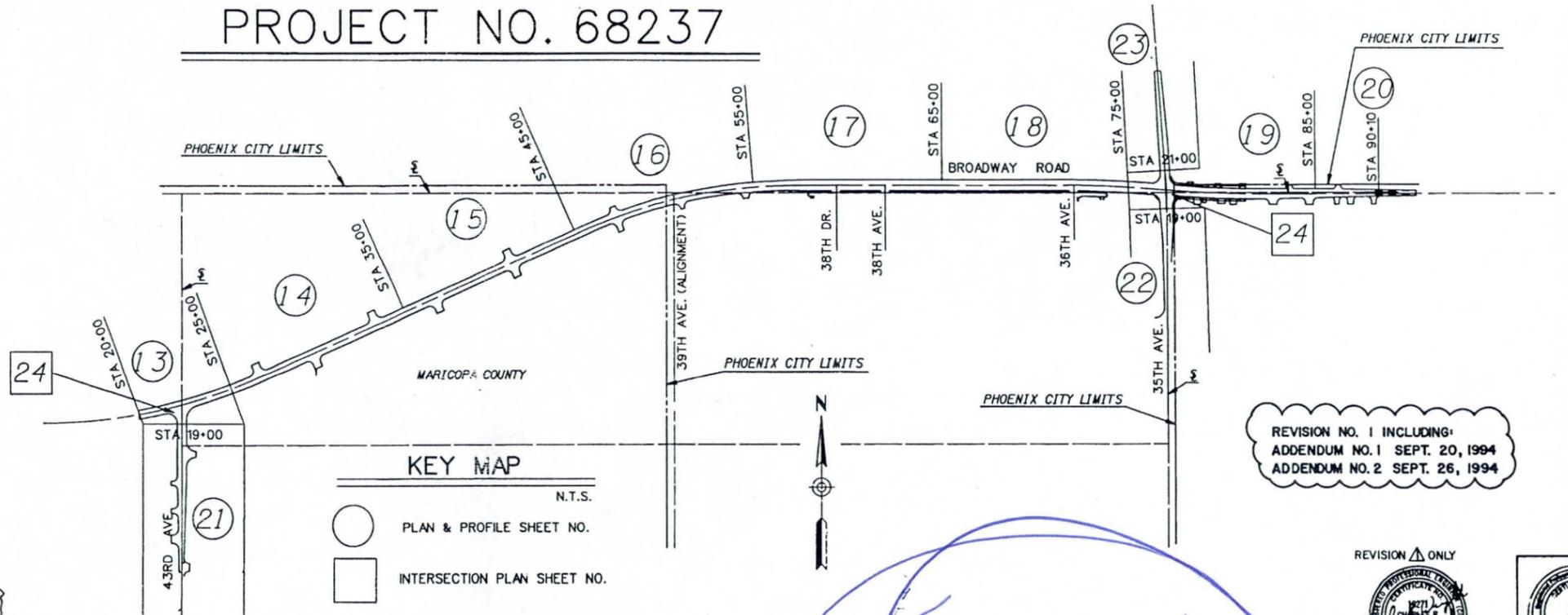


MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION

PLANS FOR THE CONSTRUCTION OF:

BROADWAY ROAD - 43RD AVENUE TO 35TH AVENUE

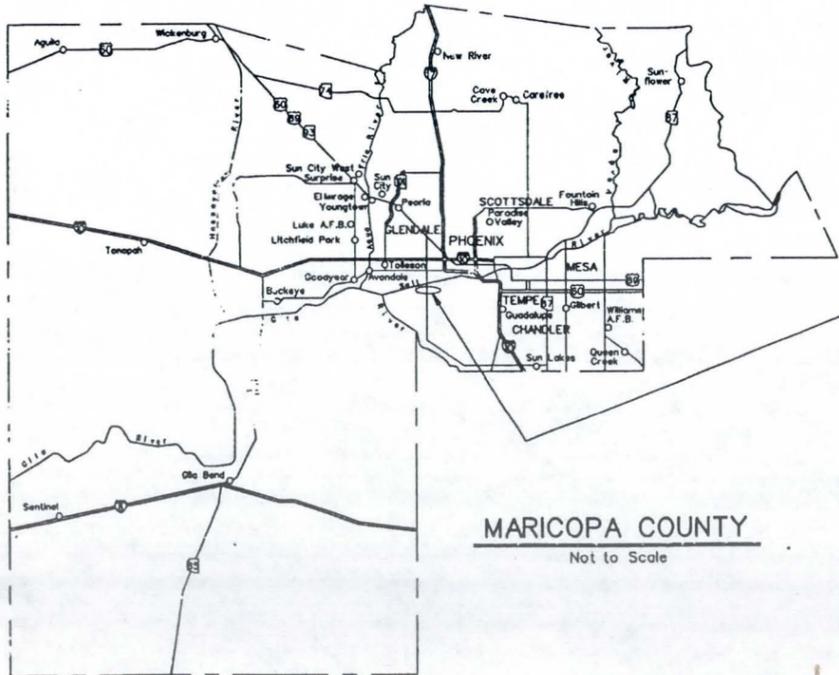
PROJECT NO. 68237



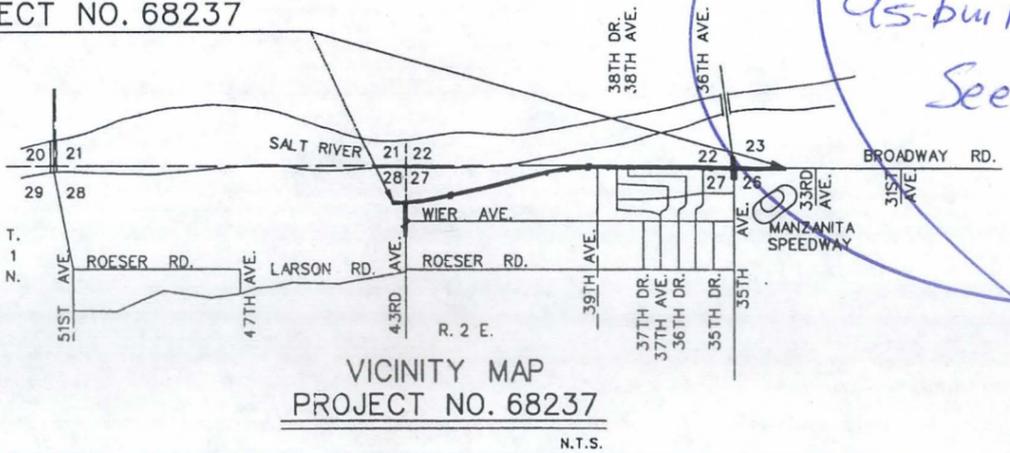
KEY MAP

- N.T.S.
- PLAN & PROFILE SHEET NO.
- INTERSECTION PLAN SHEET NO.

REVISION NO. 1 INCLUDING:
ADDENDUM NO. 1 SEPT. 20, 1994
ADDENDUM NO. 2 SEPT. 26, 1994



PROJECT NO. 68237



VICINITY MAP
PROJECT NO. 68237

*These are not
as-built drawings
See MCDOT
for As-Built*

IN COOPERATION WITH
CITY OF PHOENIX

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION

ISSUED FOR PUBLIC BIDDING BY:

Ray B. Havel 8-11-94
ASSISTANT COUNTY ENGINEER DATE

COUNTY BOARD OF SUPERVISORS

BETSEY BAYLESS - CHAIRMAN

DISTRICT 1	TOM RAWLES
DISTRICT 2	JOHN KATSENES
DISTRICT 3	BETSEY BAYLESS
DISTRICT 4	EDWARD KING
DISTRICT 5	MARY ROSE WILCOX

263-1100

NC21068
AUG 11 1994
8:28:12

BROADWAY ROAD

43RD AVE TO 35TH AVE

MARICOPA COUNTY

COUNTY	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
MARICOPA	AZ.	68237	2	44	

GENERAL NOTES

ABBREVIATIONS*

AASHTO... American Association of State Highway and Transportation Officials	ABC... Aggregate Base Course	ACFC... Asphalt Concrete Friction Course	ACI... American Concrete Institute	ACSC... Asphalt Concrete Surface Course	ADOT... Arizona Department of Transportation	Ahd... Ahead	AISC... American Institute of Steel Construction	APS... Arizona Public Service Company	Asph... Asphalt	ASTM... American Society for Testing Materials	AWS... American Welding Society	BC... Back of Curb or Brass Cap	BCR... Begin Curb Return	BCT... Breakaway Cable Terminal	Bdy... Boundary	Bov... Beveled	BFS... Begin Full Super	Bit... Bituminous	Bk... Back	Bkfl... Backfill	BLM... Bureau of Land Management	BM... Bench Mark	Br... Bridge	C&G... Curb and Gutter	CAP... Corrugated Aluminum Pipe	CAPA... Corrugated Aluminum Pipe Arch	CB... Catch Basin	CBC... Concrete Box Culvert	CG... Cattle Guard	CIP... Cast Iron Pipe	CIPP... Cast-In-Place Pipe	Cl... Clearance	CLD... Concrete Lined Ditch	CMP... Corrugated Metal Pipe	Conc... Concrete	Conn... Connection	Cont... Continuous	Cor... Corner	Cr... Crown	CSP... Corrugated Steel Pipe	CSPA... Corrugated Steel Pipe Arch	CTB... Cement Treated Base	CY... Cubic Yards	DA... Degree of Curve	DE... Drainage Easement	Def... Deflection	DA... Drainage Area	Det... Detail	DIP... Ductile Iron Pipe	Drn... Drainage	D/W... Driveway	Dwg... Drawing	E... Electricity	e... External	ECR... End Curb Return	EFS... End Full Super	EI... Elevation	Emb... Embankment	EP... Edge of Pavement	Esmt... Easement	Exc... Excavation	Exist... Existing	Exp Jt... Expansion Joint	FCD... Flood Control District	Found... Found	Fwy... Freeway	ga... Gauge	GB... Grade Brook	GM... Gas Meter	Gnd... Ground	Gr... Grade	GR... Guardrail	GV... Gas Valve	HDPE... High Density Polyethylene	Hdw... Headwall	ID... Inside Diameter	In... Invert	Irr... Irrigation	LC... Length of Curve	LC... Long Chord	LF... Lineal Feet	LS... Lump Sum	L... Left	MAG... Maricopa Association of Governments	Matl... Material	MCDOT... Maricopa County Department of Transportation	MH... Manhole	Min... Minimum	Mod... Modify	Mon... Monument	NC... Normal Crown	NPI... Non-pay Item	NPDES... National Pollutant Discharge Elimination System	OD... Outside Diameter	Pad... Pedestal	PC... Point of Curvature	PCC... Portland Cement Concrete	PI... Point of Intersection	POC... Point on Curve	POT... Point on Tangent	PRC... Point of Reverse Curvature	Prel... Preliminary	Proj... Project	Prop... Proposed	PRVC... Point of Reverse Vertical Curvature	PVC... Point of Vertical Curvature or Poly Vinyl Chloride	PVI... Point of Vertical Intersection	Pvmf... Pavement	PVT... Point of Vertical Tangency	Q... Quantity of Drainage Runoff	R... Radius	R... Range	RCP... Reinforced Concrete Pipe	Rdwy... Roadway	Rebar... Reinforcing Bar	Reloc... Relocate	Rem... Remove	Ret... Retain(ing)	RGRCP... Rubber Gasket Reinforced Concrete Pipe	RR... Railroad	Rt... Right	R/W... Right of Way	Sch... Schedule	SCS... Soil Conservation Service	SD... Storm Drain	SE... Slope Easement	SF... Square Feet	SG... Subgrade	SHdr... Shoulder	Shr... Shrinkage	Sh... Sheet	Slw... Slew	SM... Select Material	SRP... Salt River Project	Struc... Structural	Subdiv... Subdivision	Super... Super-elevation	Swell... Swell	S/W... Sidewalk	SWG... Southwest Gas Corporation	SY... Square Yards	T... Tangent Length	T... Township	TC... Top of Curb	TCE... Temporary Construction Easement	Trans... Transition	Typ... Typical	USW... US West Communications	VC... Vertical Curve	w/... with	w/o... without	WM... Water Meter	WV... Water Valve	WWF... Welded Wire Fabric
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SYMBOLS*

Exist Man-made Features	-----	Angle Point	△	Palm Tree	
Exist Edge of Pvmf	-----	Bench Mark	▲	Unclassified Deciduous Tree	
R/W Line	-----	Center Line	Ⓢ	Unclassified Arid Tree	
Property Line	-----	Feet per Foot	'/ft	Unclassified Conifer Tree	
Temp Constr Esmt	-----	Flow Line	Ⓢ	Saguaro Cactus	
Railroad Tracks	-----	Monument Line	M	Occillo	
Top of Cut	C-----	Property Line or Plate	P	Century Plant	
Toe of Slope	F-----	Section Line	§	Prickly Pear Cactus	
Trans Cut to Fill	C-----F	Exist Manhole	⊙	Miscellaneous Cactus	
Exist Barb Wire Fence	-----	Exist US Mail Box	F	Exist Sign (Single Post)	d
Exist Chain Link & Gate	-----	Exist Gas Valve	⊗	Exist Sign (Multiple Posts)	d
Exist Block Wall & Gate	-----	Exist Gas Meter	⊗	Ground Surface	
Exist Guard Rail	-----	Exist Water Valve	⊗	New Bit Pvmf (Section)	
Exist Water Line	6"W	Exist Water Meter	⊗	New Select Material (Section)	
Exist Sewer Line	8"S	Exist Utility Pole	⊕	New ABC (Section)	
Exist Electric Line	E	Guy Wire w/anchor	→	Riprap (Plan)	
Exist Gas Line	2"G	Exist Luminaire	⊕	New Bit Pvmf (Plan)	
Exist Irrigation Line	24"IRR	Luminaire w/mast	⊕*	New Conc Pvmf (Plan)	
Exist Storm Drain Line	24"SD	Exist Electric Ped	⊕E	Remove Pvmf (Plan)	
Exist Cable TV Line	CATV	Exist Telephone Ped	⊕T	New Conc (Section)	
Exist Telephone Line	T	Exist Cable TV Ped	⊕C	New Metal (Section)	
New Pipe	-----	Exist Stand Pipe	⊕SP		
Minor Wash	-----	Exist Fire Hydrant	⊕FH		

* Standard dictionary abbreviations not included.

* Symbols labeled on plans not included. Traffic Signal and Striping Symbols are on Shts 32 through 37 of the plans.

- All work to conform to the MAG Uniform Standard Specifications for Public Works Construction Dated 1992 and current revisions thereto, together with the Special Provisions.
- Standard Details refer to the MAG Standard Details for Public Works Construction unless noted otherwise.
- All existing utility lines shown on the plans are from available utility records. The Contractor shall verify the actual location before starting construction. The Contractor shall contact "Blue Stake" 263-1100, prior to beginning construction.
- The Contractor shall be responsible for the protection of all existing utilities within the work area.
- The Contractor shall use due caution when working in or around areas of overhead transmission lines and underground utilities.
- Utilities interfering with construction shall be reset or relocated by the utility company concerned unless noted otherwise.
- Disposal of all waste material, broken concrete, etc. will be the responsibility of the Contractor, subject to the approval of the Engineer.
- Stationing is Construction Centerline Stationing unless noted otherwise.
- All callout distances left and right refer to the new construction centerline unless noted otherwise.
- All trees, bushes and fences inside the right-of-way which interfere with construction will be removed by MCDOT forces unless noted otherwise.
- The Contractor shall obtain all the necessary permits from local governments for work within their jurisdiction.
- All bench marks interfering with construction shall be relocated by the Contractor as to provide uninterrupted mail service. This is a non-pay item.
- Radial dimensions are to be the edge of pavement, unless noted otherwise.
- Existing sections corners 1/4 section corners, and other land markers or monuments located within proposed construction are to be referenced by the contractor. This work must be performed by a professional land surveyor registered in the State of Arizona engaged by the Contractor.
- The maintenance of traffic for this project shall be in accordance with the Manual on Uniform Traffic Control Devices for Streets and Highways (U.S. Department of Transportation - FHWA) and the Work Zone Traffic Control Standards and Guidelines (U.S. DOT, FHWA). Procedures, as noted, shall be followed in the design, application, installation, maintenance and removal of all traffic control devices, warning devices and barriers necessary to protect the public and workers from hazards within the project limits.
- The contractor shall remove all structures and obstructions within the project right-of-way unless otherwise noted on the project plans.
- The project temporary and final roadway striping shall be performed by the Contractor in accordance with the details shown on the plans or as described by the Engineer including obliteration of existing and temporary striping.
- Pavement thickness shown on the plans are minimum thicknesses.
- All new Storm Drain Pipes shall be RGRCP, Class III (Rubber Gasket Reinforced Concrete Pipe) unless noted otherwise. (See Pipe Summary Tables)
- Backfill on all new pipe installations within the future roadway prism shall be Type "B" MAG Detail No. 200 or ABC-Conc. slurry as specified in the special provisions section.
- Compaction densities shall conform to MAG Section 601 and shall be Type I for trench backfill within the future roadway prism and Type II at all other locations.
- An attempt has been made by the County to identify the location of all underground utilities located within the limits of this project. However, it shall be the contractor's responsibility to contact the appropriate utility companies and verify information provided on the plans. Refer to the Construction Special Provisions for specific telephone numbers and contact persons of utility companies within the project area.
- Pipes and reinforced concrete structures may be adjusted to fit field conditions in a manner approved by the Engineer.
- Pay quantities for pipe shall be from center of manholes, inside face of structures and catch basins, or end of stubbed pipe.
- All existing ditches to be filled shall have any poor or deleterious material removed and replaced with material acceptable to the Engineer prior to filling and compacting to the new grade line.
- Earthwork quantities include earthwork within the roadway template and do not include trenching and backfill of pipes.

NO.	REVISION	BY	DATE
MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION ENGINEERING DIVISION			
BROADWAY ROAD 43RD AVENUE TO 35TH AVENUE PROJECT NO. 68237			
		BY	DATE
		M. A. NORBY	8/94
		M. J. SCHNEIDER	8/94
		J. H. KRAMER	8/94
GENERAL NOTE SHEET		SHEET OF 2 44	

BROADWAY ROAD
43RD AVE TO 35TH AVE
MARICOPA COUNTY

LENGTH OF PROJECT

BROADWAY RD STA 20+00.00 TO STA 90+10.00=7010.00 LF
43RD AVE STA 11+50.00 TO STA 20+00.00=850.00 LF
35TH AVE STA 12+90.00 TO STA 26+00.00=1310.00 LF
TOTAL=9170.00 LF
9170 LF/5280=1.74 MI

NPDES AREA OF PROJECT

BROADWAY RD STA (20+00.00) TO STA (54+17.91) X (110') R/W WIDTH = 375970.10 SF
BROADWAY RD STA (54+17.91) TO STA (76+92.13) X (132.5') R/W WIDTH = 301334.15 SF
BROADWAY RD STA (76+92.13) TO STA (90+10.00) X (98') R/W WIDTH = 129151.26 SF
43RD AVE STA (16+50.00) TO STA (19+00.00) X (95') R/W WIDTH = 23750.00 SF
35TH AVE STA (16+25.00) TO STA (19+00.00) X (130') R/W WIDTH = 35750.00 SF
35TH AVE STA (21+00.00) TO STA (22+50.00) X (98') R/W WIDTH = 14700.00 SF
TOTAL = 880655.51 SF
880655.51 SF/43560 = 20.22 AC

DESIGN DATA

DESIGN STANDARDS

a BROADWAY - 43RD AVENUE TO 35TH AVENUE MARICOPA COUNTY STANDARDS
b BROADWAY - 35TH AVENUE TO 27TH AVENUE CITY OF PHOENIX STANDARDS

DESIGN YEAR TRAFFIC (2010) ADT
a BROADWAY - 35TH AVENUE TO 27TH AVENUE 16,000
b BROADWAY - 43RD AVENUE TO 35TH AVENUE 12,000
c 43RD AVENUE 12,500
d 35TH AVENUE (NORTH OF BROADWAY) 25,000
e 35TH AVENUE (SOUTH OF BROADWAY) 18,000

MINIMUM DESIGN SPEED
a BROADWAY - 43RD AVENUE TO 1/2 MILE WEST OF 35TH AVENUE 50 MPH
b BROADWAY - 1/2 MILE WEST OF 35TH AVENUE TO 27TH AVENUE 45 MPH
c 43RD AVENUE 40 MPH
d 35TH AVENUE 50 MPH

DESIGN HOUR FACTOR 10%
DISTRIBUTION FACTOR 60%
TRUCK FACTOR 15%

FUNCTIONAL CLASSIFICATION
a BROADWAY - 43RD AVENUE TO 1/2 MILE WEST OF 35TH AVENUE RURAL MINOR COLLECTOR
b BROADWAY - 1/2 MILE WEST OF 35TH AVENUE TO 27TH AVENUE URBAN MINOR ARTERIAL
c 43RD AVENUE URBAN MAJOR COLLECTOR
d 35TH AVENUE URBAN MINOR ARTERIAL

M.A.G. STANDARDS

NUMBER	DESCRIPTION
120-2	SURVEY MARKER (TYPES "D" & "E")
160	6' CHAIN LINK FENCE & GATE
200	BACKFILL, PAVEMENT & SURFACE REPLACEMENT (TYPE "A", "T"-TOP)
201	PAVEMENT SECTION AT TERMINATION
205	PAVED TURNOUTS (TYPE "A")
206-1,	
206-2	CONCRETE SCUPPER
220	CURB AND GUTTER (TYPE "A")
222	SINGLE CURB (TYPE "A")
223	MEDIAN NOSE TRANSITION
301	BLOCKING FOR WATER GATE AND BUTTERFLY VALVES
360	FIRE HYDRANT INSTALLATION
391-1	FRAME AND COVER GRADE ADJUSTMENT (TYPE "A", "B", & "B/A")
420	PRE-CAST CONCRETE SEWER MANHOLE
422	SEWER MANHOLE AND COVER FRAME ADJ
427	STUB OUT AND PLUGS
501-1,	
501-2	HEADWALL
505	CONCRETE PIPE COLLAR
506	IRRIGATION VALVE INSTALLATION
507	ENCASED CONCRETE PIPE
522	STORM DRAIN MANHOLE SHAFT
524	STORM DRAIN LATERAL PIPE CONNECTIONS
535	CATCH BASIN, TYPE F

ADOT STANDARDS

C-13.80	PIPE OUTFALL REINFORCEMENT
C-15.80	CATCH BASIN, MEDIAN FLUSH (APRON DETAIL ONLY)

CITY OF PHOENIX STANDARDS

P1016	RIGHT-TURN LANE DESIGN	P1343	WATERLINE CUT & PLUG FOR 12" DIAMETER MAIN & SMALLER
P1017	ACCESS ROAD OPENING	P1520	STORM DRAIN MANHOLE BASE 48" & SMALLER
P1018	ACCESS ROAD TERMINATION AT ALLEYS	P1563	ACCESS BARRIER
P1233	SIDEWALK RAMP (TYPE "A")	P1269-1	CATCH BASIN, TYPE M
P1255	ALLEY ENTRANCE	P1570	CATCH BASIN, TYPE N
P1255	CONCRETE DRIVEWAY ENTRANCE		
P1342	WATER SERVICE CONNECTIONS		

COUNTY	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
MARICOPA	AZ.	68237	3	44	

INDEX OF SHEETS

SHEET NUMBER	DESCRIPTION
1	COVER SHEET
2	GENERALS NOTES, ABBREVIATIONS AND SYMBOLS SHEET
3	DESIGN DATA, INDEX OF SHEETS, STANDARD DRAWING LIST, AND EARTHWORK SHEET
4-6	TYPICAL ROADWAY SECTIONS SHEETS
7	SPECIAL DETAILS SHEET
8-10	SUMMARY OF ESTIMATED QUANTITIES SHEETS
11	PIPE SUMMARY SHEET
12	GEOMETRIC LAYOUT SHEET
13-23	PLAN AND PROFILE SHEETS
24	INTERSECTION LAYOUT AND STAKING PLAN SHEET
25-29	PIPE PROFILES SHEET
30	WATERLINE PLAN AND PROFILE SHEET
31	SANITARY SEWER PLAN AND PROFILE SHEET
32-34	SIGNING AND PAVEMENT MARKING PLAN SHEETS (MCDOT)
35	TRAFFIC SIGNAL LAYOUT SHEET (COP)
36	TRAFFIC SIGNAL STANDARD DETAILS SHEET (COP)
37	TRAFFIC SIGNAL STANDARD DETAILS SHEET (MCDOT)
38-39	SRP IRRIGATION PLANS (FOR REFERENCE ONLY)
40	MASS ORDINATE AND EARTHWORK SUMMARY
41-44	SRP LIGHTING PLANS

NO.	REVISION	BY	DATE

MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION

BROADWAY ROAD
43RD AVENUE TO 35TH AVENUE
PROJECT NO. 68237

DESIGNED	BY	DATE
M. A. NORBY		8-94
M. J. SCHNEIDER		8-94
J. H. KRAMER		8-94

Kimley-Horn and Associates, Inc. ©1994

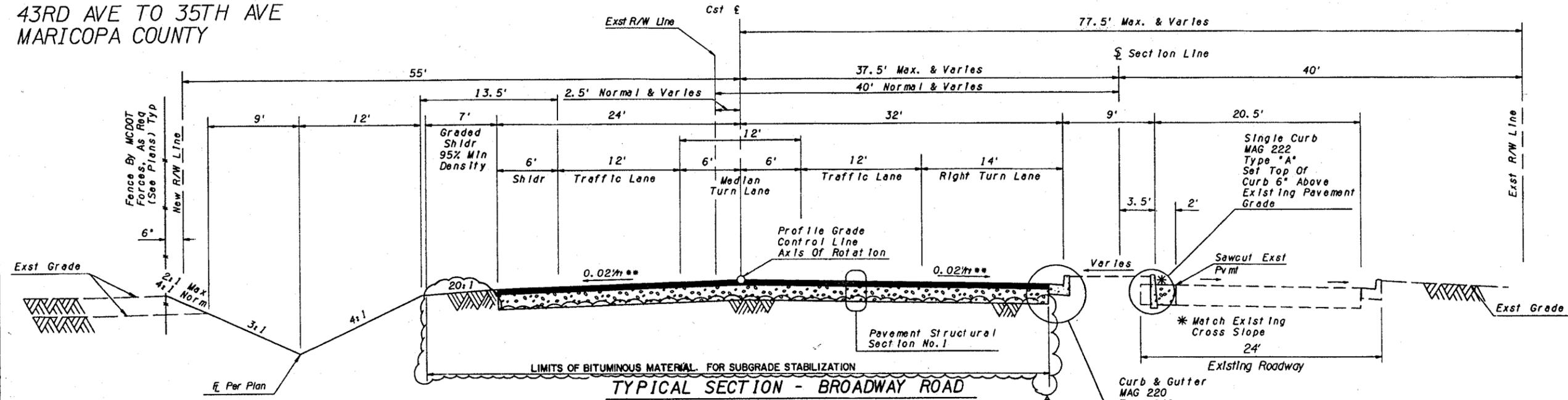
DESIGN DATA, INDEX SHEET OF 3 44

BROADWAY ROAD

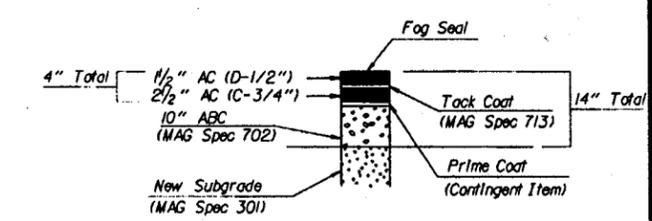
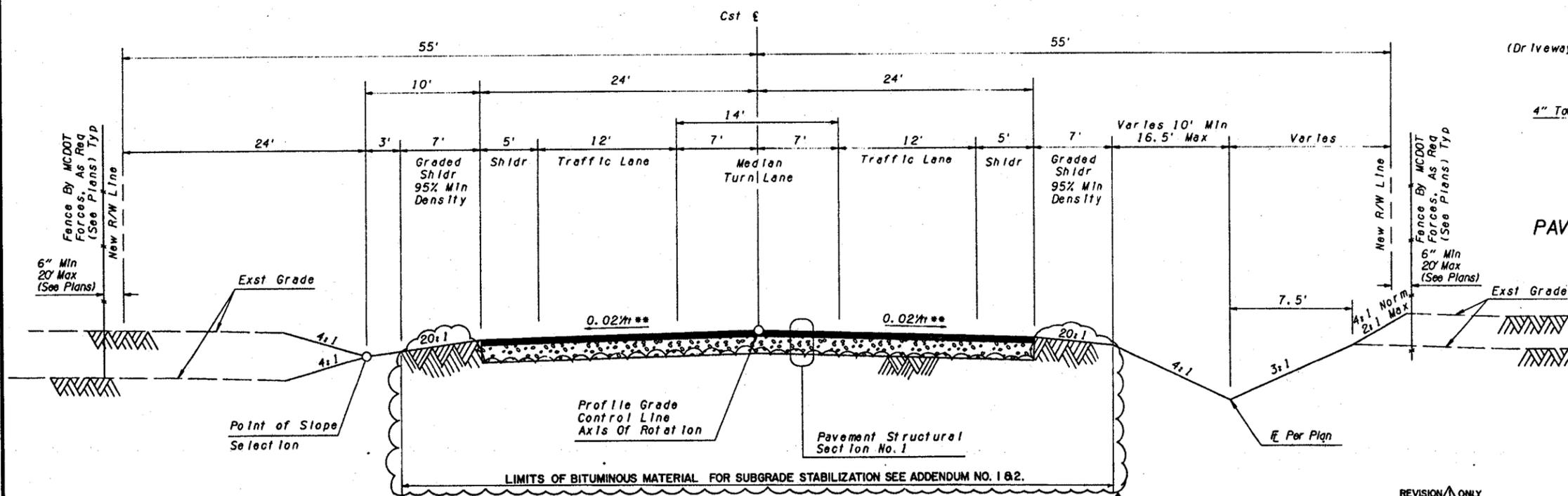
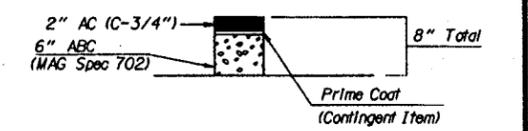
43RD AVE TO 35TH AVE

MARICOPA COUNTY

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	4	44	



Ditch From Sta 61+20 To Sta 75+00
Ditch Tapers To Grader Ditch From Sta 75+00 To 76+00



ADDENDUM NO. 1 B 2	REVISION	CRW	10/5/94
NO.	BY	DATE	
MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION ENGINEERING DIVISION BROADWAY ROAD 43RD AVENUE TO 35TH AVENUE PROJECT NO. 68237			
DESIGNED	M.A. NORBY	8-94	
DRAWN	M.J.S./J.D.	8-94	
CHECKED	J.H. KRAMER	8-94	
		BY	DATE
TYPICAL SECTIONS			SHEET OF 4 44

TYPSECI 467
 Aug. 24, 1994
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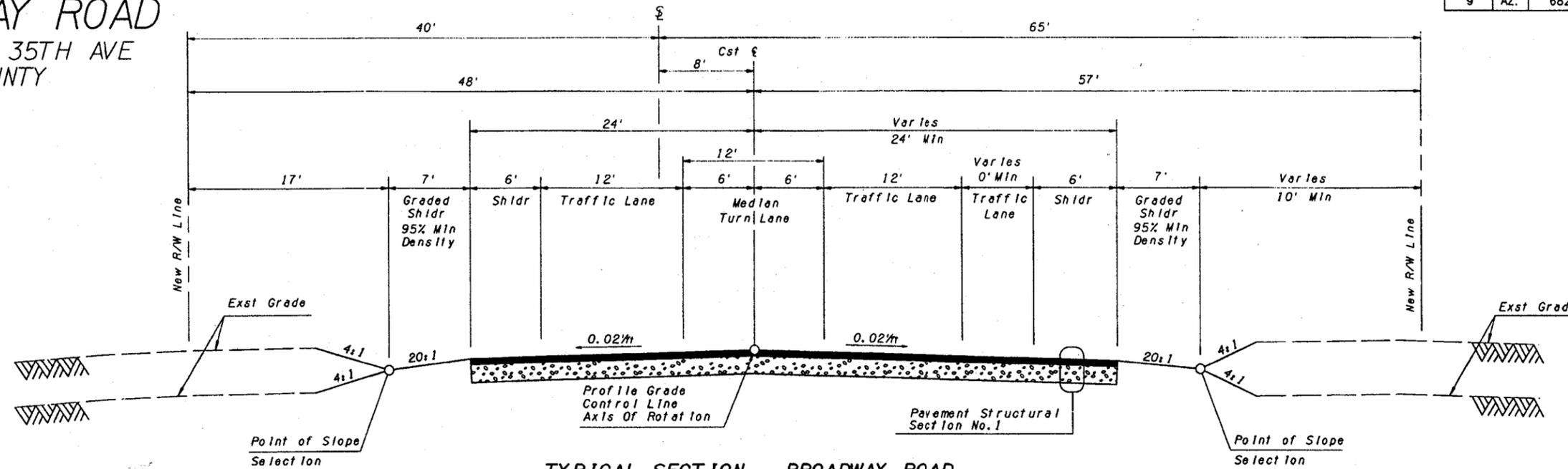


TRACS NO.

BROADWAY ROAD

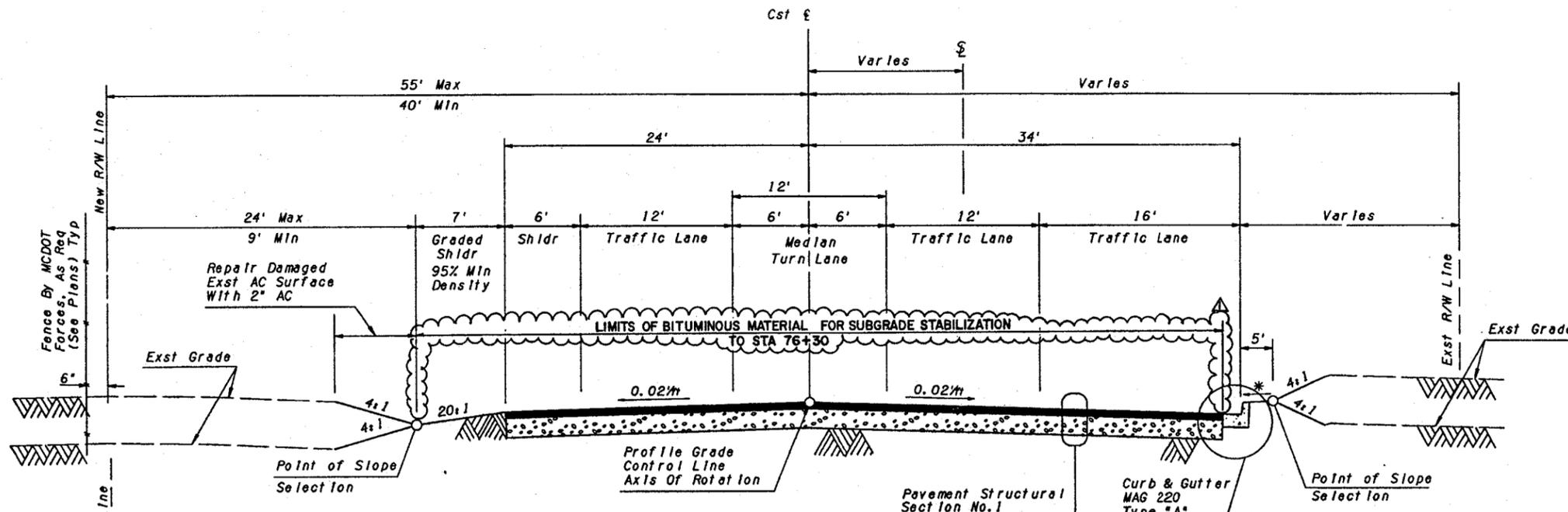
43RD AVE TO 35TH AVE
MARICOPA COUNTY

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	5	44	



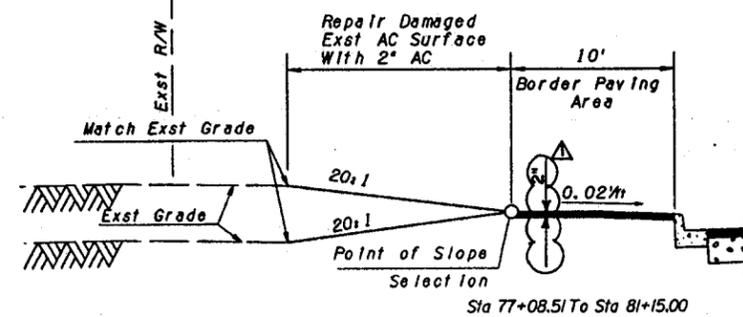
TYPICAL SECTION - BROADWAY ROAD

Sta 81+20 To Sta 85+10, 24' Li & Rt

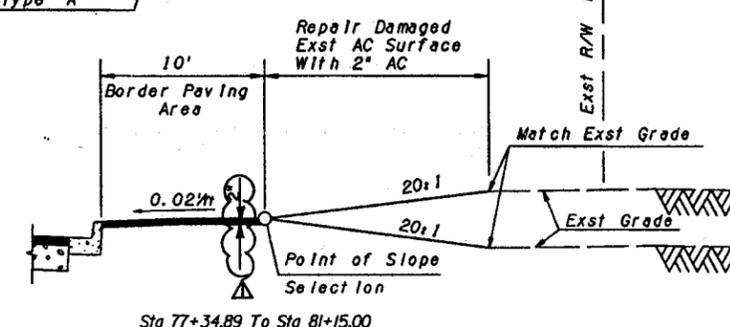


TYPICAL SECTION - BROADWAY ROAD

Sta 73+75 To Sta 80+10, 24' Li, 34' Rt



Sta 77+08.51 To Sta 81+15.00



Sta 77+34.89 To Sta 81+15.00

NOTE
* 0.02 %/ft

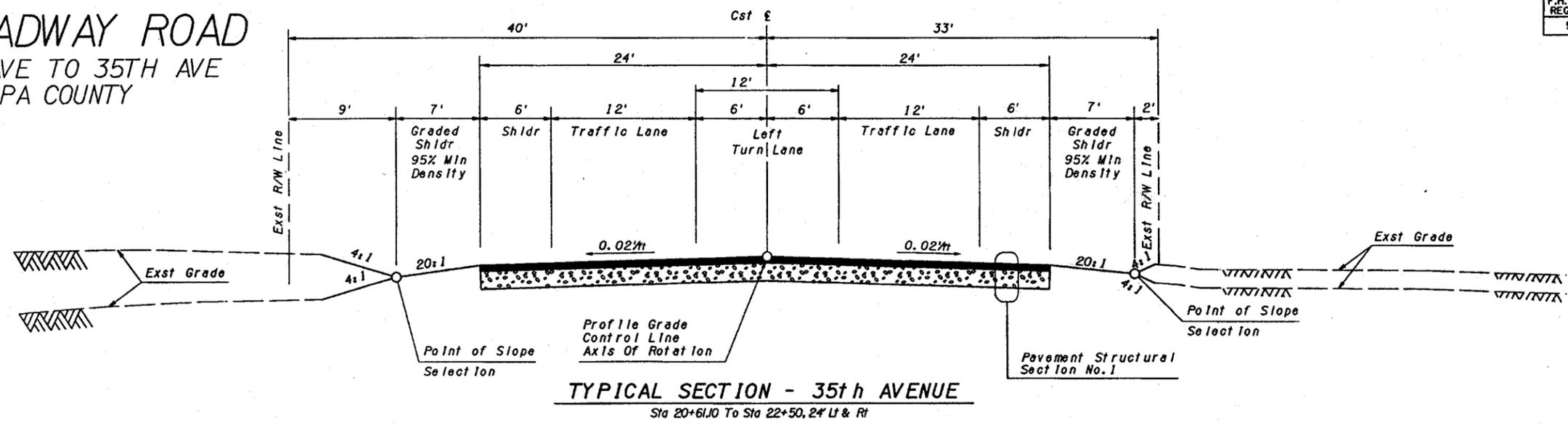


ADDENDUM NO. 1	REVISION	CRW	10/5/94
		BY	DATE
MARICOPA COUNTY			
DEPARTMENT OF TRANSPORTATION			
ENGINEERING DIVISION			
BROADWAY ROAD			
43RD AVENUE TO 35TH AVENUE			
PROJECT NO. 68237			
DESIGNED	M.A. NORBY	8-94	
DRAWN	M.J.S./J.D.	8-94	
CHECKED	J.H. KRAMER	8-94	
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TYPICAL SECTIONS			SHEET OF 5 44

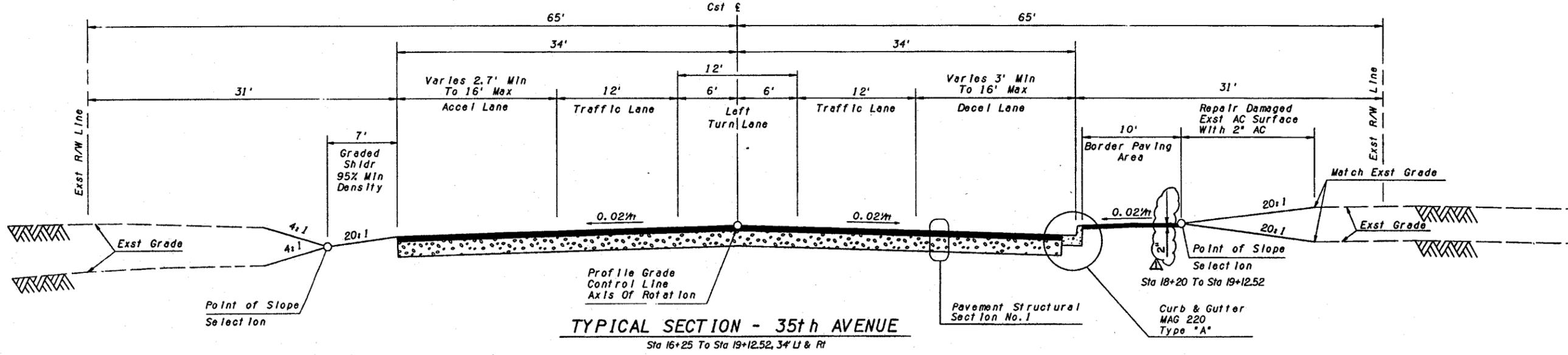
TRACS NO.

BROADWAY ROAD
43RD AVE TO 35TH AVE
MARICOPA COUNTY

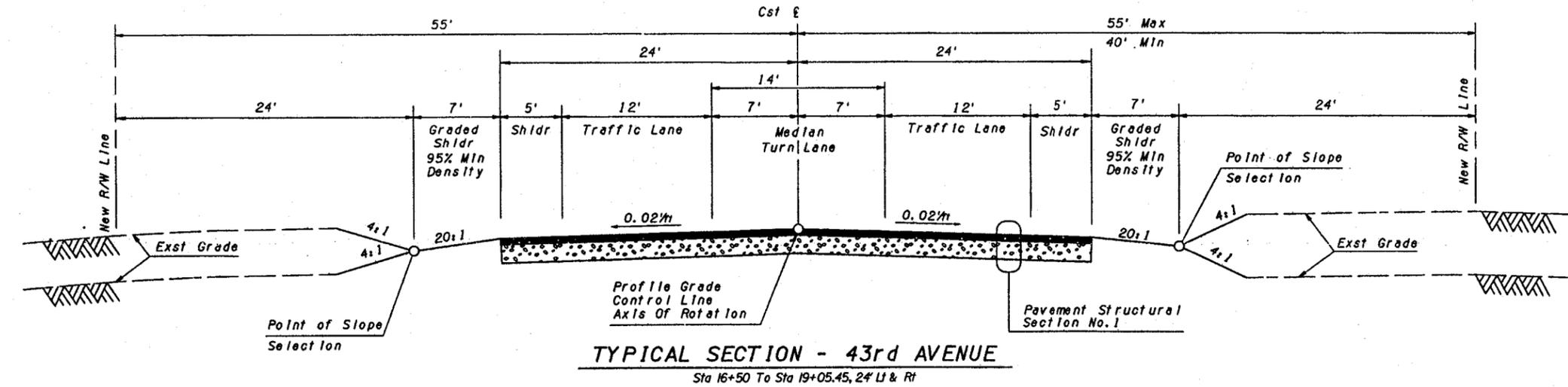
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	6	44	



TYPICAL SECTION - 35th AVENUE
Sta 20+61.0 To Sta 22+50.24' L & R



TYPICAL SECTION - 35th AVENUE
Sta 16+25 To Sta 19+12.52, 34' L & R



TYPICAL SECTION - 43rd AVENUE
Sta 16+50 To Sta 19+05.45, 24' L & R

REVISION ONLY



ADDENDUM NO. 1 & 2	REVISION	C.R.W.	10/5/94
NO.	BY	DATE	
MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION ENGINEERING DIVISION			
BROADWAY ROAD 43RD AVENUE TO 35TH AVENUE PROJECT NO. 68237			
DESIGNED	M.A. NORBY	8-94	
DRAWN	M.J.S./J.D.	8-94	
CHECKED	J.H. KRAMER	8-94	
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TYPICAL SECTIONS			SHEET OF 6 44

TYPICAL SECTION
Rev. 24, 1994
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TRACS NO.

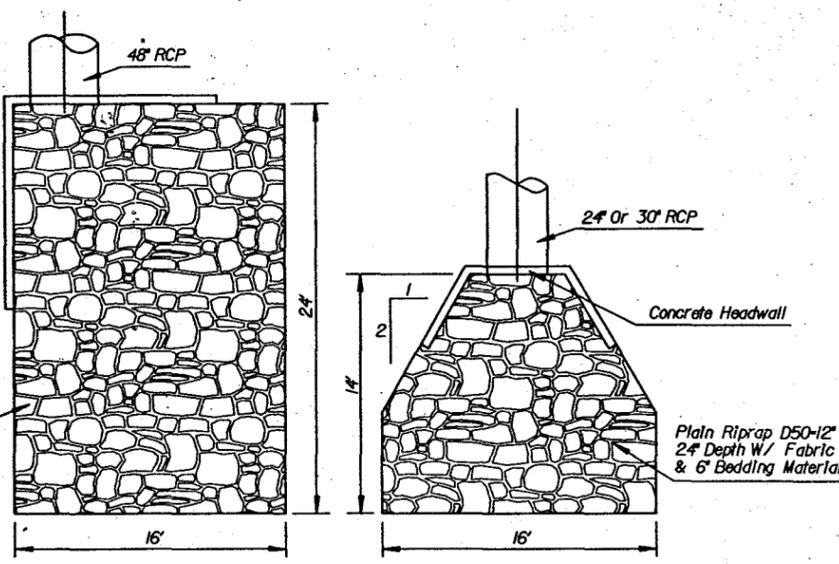
BROADWAY ROAD

43RD AVE TO 35TH AVE
MARICOPA COUNTY

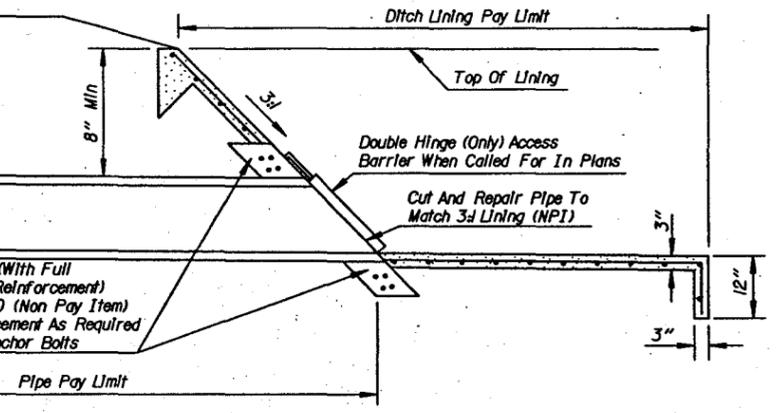
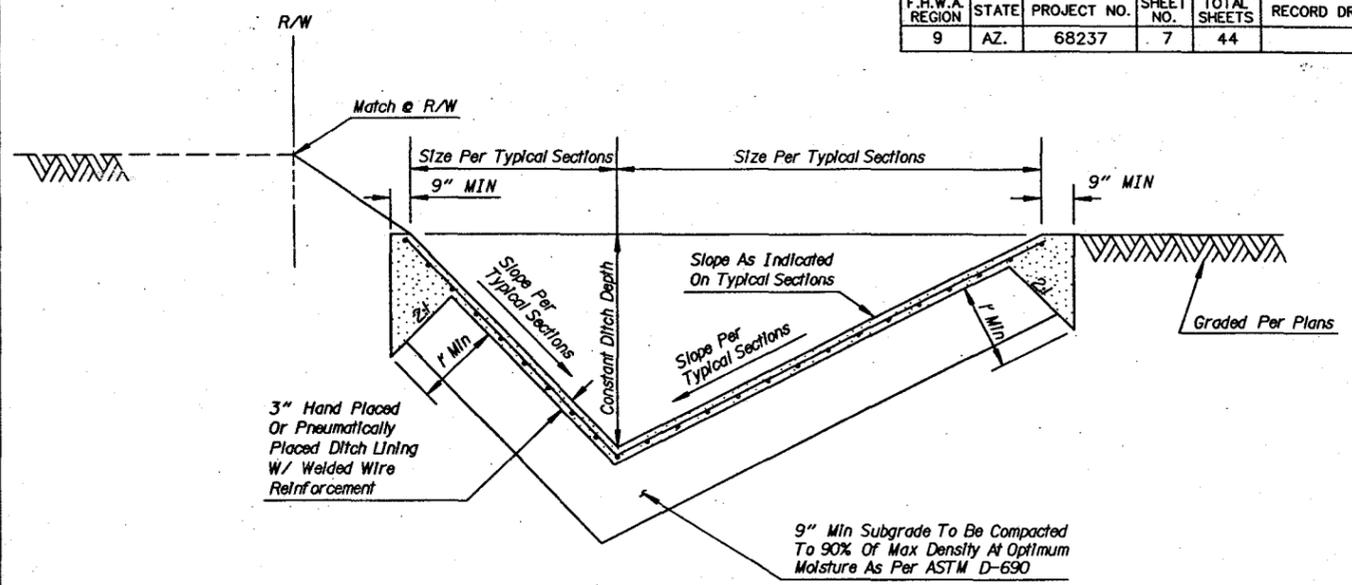
F.H.W.A REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	7	44	

- NOTES:
- OUTLET OF PIPE TO SALT RIVER
STA 22+02 43RD AVENUE
STA 63+15 BROADWAY ROAD
STA 25+98 35TH AVENUE

Plain Riprap D50-12"
2" Depth W/ Fabric
& 6" Bedding Material

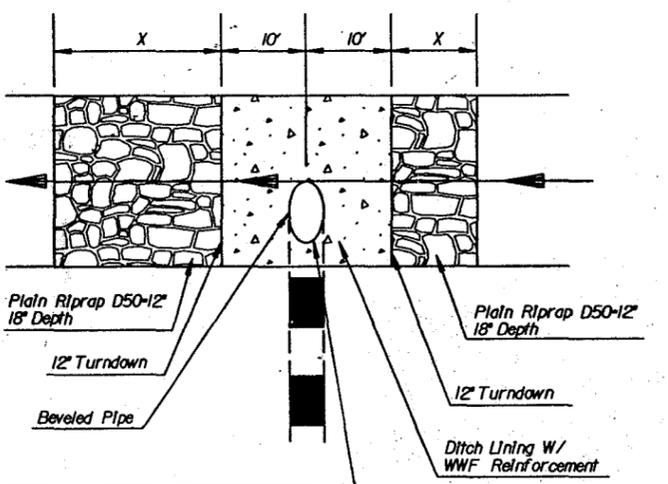


RIPRAP AT HEADWALL DETAIL

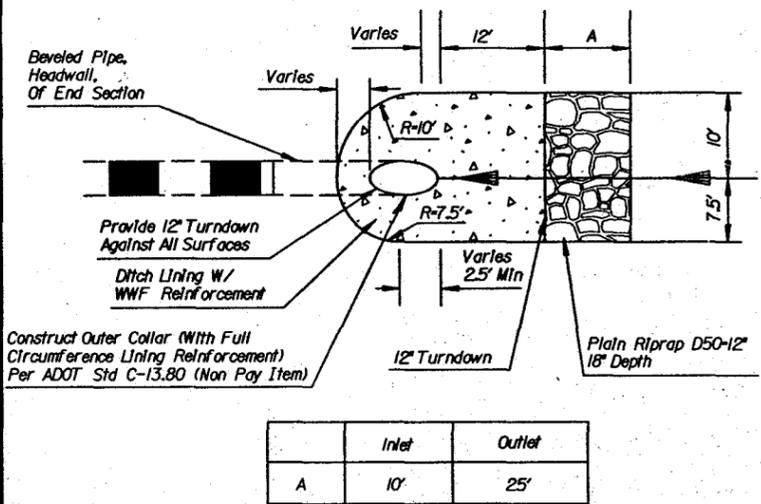


- NOTES:
- All Cutoff Walls At Termination Of Lining Shall Be 12" Depth.
 - 2" Slump, Fiber Mesh Concrete Or Approved Equal.
 - 1/2" Score @ 20' OC.
 - For Dimensions Not Shown See Plan Sheets And Typical Sections.
 - All Steel Reinforcement Mesh Will Be 6 x 6 Welded Wire Fabric, W 1.4 x W 1.4.

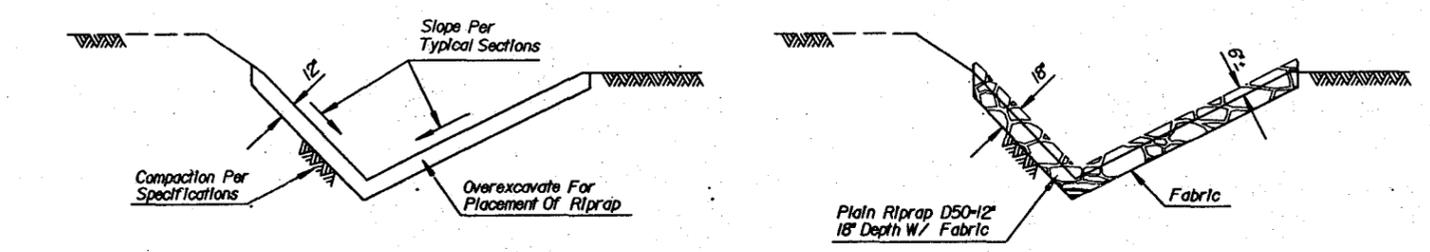
DITCH LINING DETAIL



CHANNEL LINING DETAIL

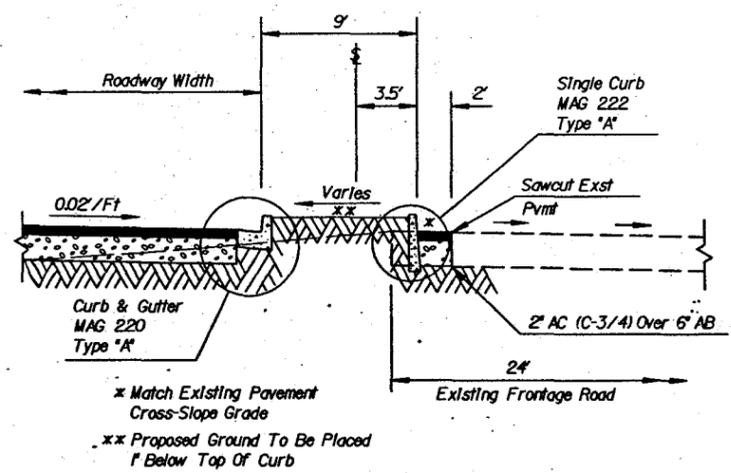


END SECTION CHANNEL LINING DETAIL



- NOTES:
- In Open Channels Place 25 Linear Feet Of Ditch Rip Rap Approximately 100' Apart As Shown In Plans.

RIP RAP IN DRAINAGE DITCH DETAIL



FRONTAGE ROAD MEDIAN DETAIL

NO.	REVISION	BY	DATE
MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION ENGINEERING DIVISION			
BROADWAY ROAD 43RD AVENUE TO 35TH AVENUE PROJECT NO. 68237			
DESIGNED	M.A. NORBY	DATE	8-94
DRAWN	M.J.S./J.D.		8-94
CHECKED	J.H. KRAMER		8-94
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DETAILS			SHEET OF 7 44

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 Aug 24, 1994
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TRACS NO.

SUMMARY OF ESTIMATED QUANTITIES PAVING BID ITEMS

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	8	44	

ITEM NUMBER	ITEM DESCRIPTION	UNIT	SHEET NUMBER													TOTAL									
			13	14	15	16	17	18	19	20	21	22	23												
205.00000	Roadway Excavation (Unsuitable Material)	C.Y.	726	2592	389	1244																			4951
220.42410	Riprap with Fabric	S.Y.	115	384		343	298	612																	1769
225.09000	Watering	1000 Gal	160	310	310	300	305	315	440	100	155	65	65												2525
301.02000	Subgrade Preparation	S.Y.	3214	6143	6143	5964	6072	6262	8801	2011	3087	1257	1267												50221
302.00000	Bit. Material Sub. Stabilization	S.Y.																							35000
310.07100	Aggregate Base	Ton	1627	3110	3110	3020	3074	3170	4520	1018	1563	675	642												25529
315.07000	Bituminous Prime Coat (Contingent)	Ton	4.03	7.92	7.92	7.69	7.83	8.08	11.34	2.59	3.98	1.63	1.63												65
321.02100	A.C. Pavement (C-3/4) (2 - 1/2")	Ton	440	841	841	817	831	857	1230	276	423	185	174												6915
321.02240	Paved Detour	S.Y.																							4500
321.03100	A.C. Pavement (D-1/2) (1 - 1/2")	Ton	264	504	504	490	499	515	723	167	254	104	105												4129
329.07000	Bituminous Tack Coat (Contingent)	Ton	1.38	2.55	2.55	2.56	2.61	2.69	3.78	0.87	1.33	0.54	0.54												21
333.00100	Fog Seal Coat (Contingent Item)	Ton	1.38	2.55	2.55	2.56	2.61	2.69	3.78	0.87	1.33	0.54	0.54												21
333.00200	Blotter Sand (Contingent Item)	Ton																							22
	Sawcut (NPI)	L.F.		120	40		780	780		464	979	335													3498
340.00025	Concrete Single Curb, Type "A" (MAG 222)	L.F.					676	823																	1499
340.01125	Curb & Gutter, Type "A", H=6" (MAG-220)	L.F.					766	1170	1035			80													3051
340.09953	Concrete Driveway Entrance	S.F.							2745			250													2725
340.22945	Sidewalk, Ramp, Type "A" (COP-P1233)	Ea							3																3
340.23959	Alley Entrance (COP P1255)	S.F.					170	170																	340
345.01100	Adjust W.V. Frame & Cover (MAG-391-1), Type "A"	Ea						1	5		2	7	2												17
345.01101	Adjust W.V. Frame & Cover (MAG-391-1), Type "B"	Ea							1																1
345.03400	Adjust Sewer Manhole Cover Elev	Ea							5		3														8
345.06100	Adjust Water Meter Box & Cover Elev	Ea							1		2														3
350.01100	Removal Of Existing Improvements	L.S.																							1
350.08000	Remove Conc Curb & Gutter	L.F.						26	134	200															360
350.08001	Removal Of Concrete Pipe	L.F.			121																				261
350.08003	Removal Of Block Fence	L.F.								140															140
350.08004	Removal Of Guard Rail	L.F.									173														173
401.00000	Traffic Control	L.S.																							1
401.01100	Uniformed Off Duty Officers	Hour																							250
401.04000	Temporary Concrete Barrier	L.F.																							800
401.99000	Temporary Traffic Signal	L.S.																							1
402.01310	3" PVC Conduit Schedule 40 (For Irrigation)	L.F.					104	52																	156
405.00010	Survey Monument, (MAG-120-2), Type "D"	Ea								1		2													3
405.01010	Survey Monument, (MAG-120-2), Type "E"	Ea	1																						1
420.00600	6' Chain Link Fence (MAG 160)	L.F.	506																						626

▲ All Changes

REVISION ▲ ONLY



Addendum No. 1 & 2		CRW	10/5/94
NO.	REVISION	BY	DATE
MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION ENGINEERING DIVISION BROADWAY ROAD 43RD AVE TO 35TH AVE PROJECT NO. 68237			
DESIGNED		BY	DATE
DRAWN	M. J. SCHNEIDER		8-94
CHECKED	J. H. KRAMER		8-94
		© 1994	
SUMMARY OF ESTIMATED QUANTITIES			SHEET OF 8

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 Aug. 24, 1994
 11:05:15

TRACS NO.

NEW PIPE SUMMARY

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	11	44	

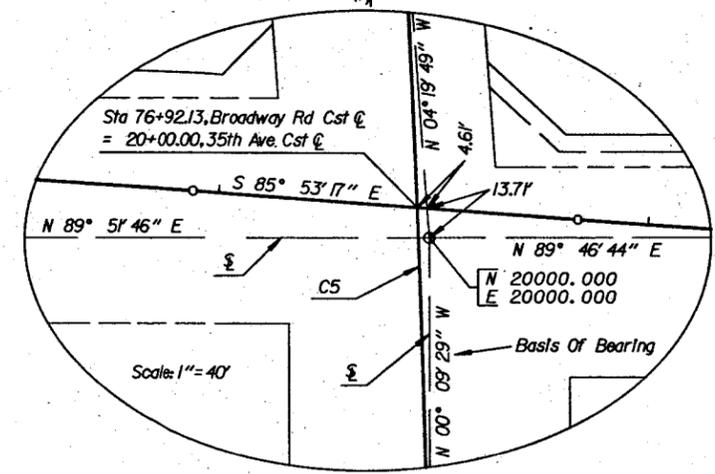
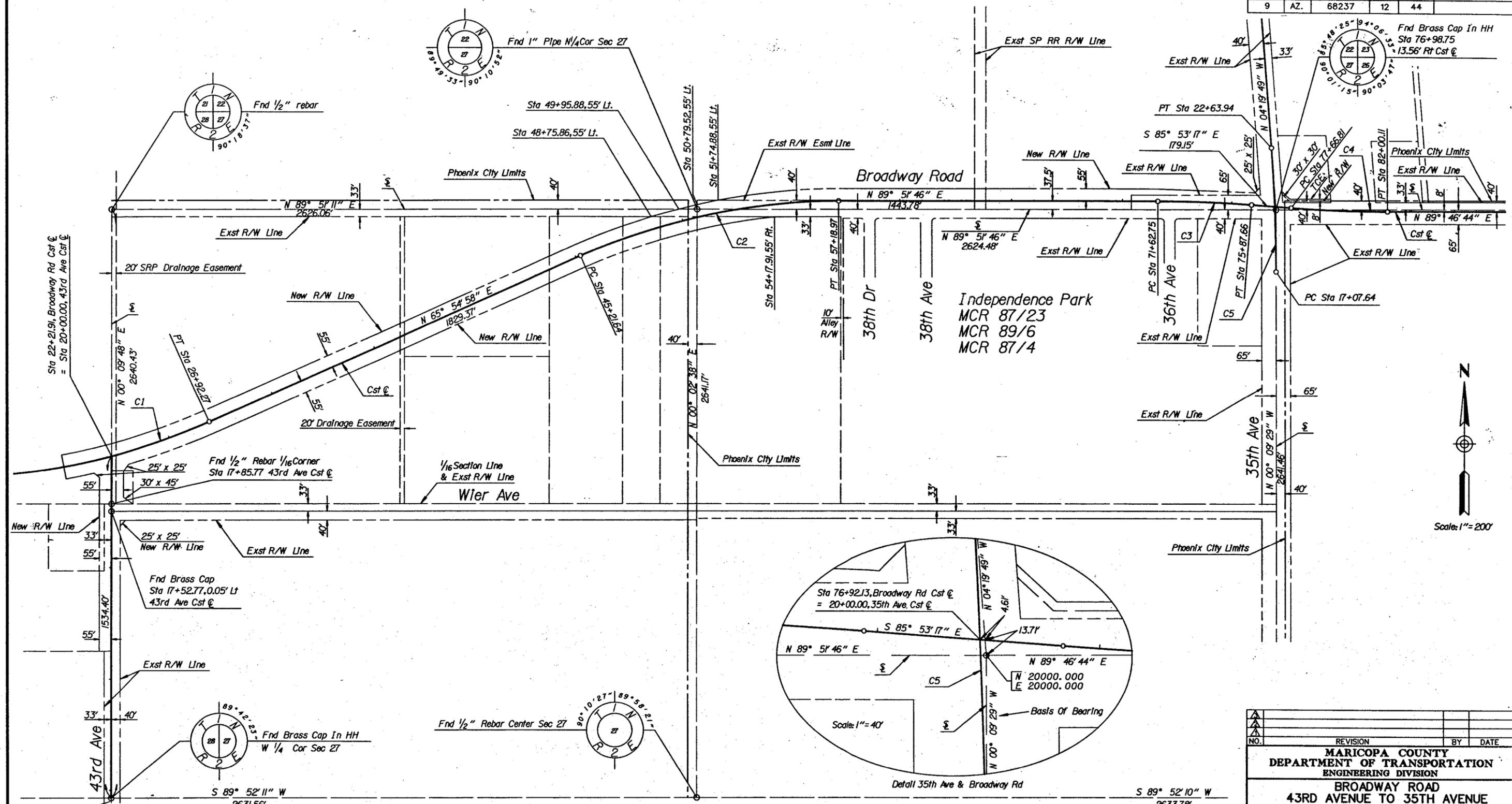
	PIPE LOCATION				SKEW	SIZE (in.)	LENGTH (ft.)	CMP		REINF. CONC. CLASS	CIPP Wall Thick.	MANHOLES STDS.	CATCH BASINS			HEADWALLS			END SECT.	CONC. SPILL-WAY	REMARKS		
	BEGIN STATION	OFFSET	END STATION	OFFSET				Corr.	Coat.				STD.	WING	GRATE	STD.	TYPE	AREA					
BROADWAY ROAD	22+29	10' RT	23+05	47.5' RT	24.7°	42"	84'			3		48" MAG 522 SHAFT COP 1520 BASE											
	29+08	47.5' RT	29+94	47' RT	0°	36"	86'			3													
	33+00	47.5' RT	45+41	47.5' RT	0°	36"	1241'			3													
	36+06	55' RT	36+57	55' LT	114.9°	18"	121'			3												MATCH EXISTING PIPE	
	46+41	47.5' RT	47+09	44.5' RT	177.5°	24"	68'			3													
	50+11	45' RT	50+66.5	42.5' RT	0°	24"	56'			3													
	53+55	43.5' RT	54+13	41' RT	0°	24"	58'			3													
	61+45	32' RT	61+45	43.5' LT	90°	18"	76'			3													
	61+45	34.75' RT	61+63	60' RT	50.5°	18"	31'			3													
	63+15	44' LT	63+15	140' LT	90°	30"	96'			3													NEENAH TYPE SF 30" AUTOMATIC DRAINAGE GATE W/CAST IRON COVER
	64+87	32' RT	64+87	43.5' LT	90°	18"	76'			3													
	64+87	34.75' RT	64+87	60' RT	90°	18"	26'			3													
	68+29	32' RT	68+29	43.5' LT	90°	18"	76'			3													
	68+29	34.75' RT	68+29	60' RT	90°	18"	26'			3													
	74+75	34' RT	74+75	43.5' LT	90°	24"	78'			3													
	74+75	36.5' RT	74+75	49.5' RT	90°	24"	13'			3													
	77+55	22' LT	77+55	10.5' RT	90°	18"	33'			3													
	77+78	32' RT	77+78	12.5' RT	90°	18"	20'			3													
81+10	32' RT	81+10	3' LT	90°	18"	35'			3														
81+10	34' RT	81+10	47' RT	90°	18"	13'			3														
81+45	30' LT	81+45	6' LT	90°	18"	24'			3														
76+88.13	19' RT	81+43	4' LT	0°	24"	455'			3														
43rd AVENUE	16+95	35' LT	16+95	4' RT	90°	18"	37'			3													
	16+95	41' RT	16+95	4' RT	90°	18"	35'			3													
	16+95	4' RT	18+08	9' RT	2.5°	24"	113'			3													
	18+12	9' RT	19+90	9' RT	0°	30"	178'			3													
	19+94	9' RT	22+02	9' RT	0°	48"	208'			3													
	18+15	48' LT	18+15	6' LT	90°	18"	42'			3													
	19+10	34' RT	19+10	3' LT	90°	18"	37'			3													
	20+62	24' RT	20+62	3' LT	90°	18"	32'			3													
	18+17	4' LT	19+79	4' LT	0°	24"	162'			3													
	19+83	4' LT	21+50	4' LT	0°	24"	167'			3													
35th AVENUE	21+50	4' LT	22+50	55' LT	22°	24"	110'			3													
	22+50	55' LT	25+98	55' LT	0°	24"	348'			3													

- * REINFORCED CONCRETE HEADWALL 501-1, 2 L L₁=8' L₄=4'
- ** REINFORCED CONCRETE HEADWALL 501-1, 2 U L₁=8'
- *** REINFORCED CONCRETE HEADWALL 501-1, 2 U
- **** REINFORCED CONCRETE HEADWALL 501-1, 2 U L₄=2'-6"

NO.	REVISION	BY	DATE
MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION ENGINEERING DIVISION			
BROADWAY ROAD 43RD AVENUE TO 35TH AVENUE PROJECT NO. 68237			
DESIGNED	M A NORBY	BY	DATE
DRAWN	M A NORBY	BY	DATE
CHECKED	J H KRAMER	BY	DATE
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NEW PIPE SUMMARY SHEET			SHEET OF 11 44

PIPESUM.dgn
Aug 24, 1994
11:06:29

TRACS NO.



Curve No. 1
 PI Sta 20+93.16
 $\Delta=24^{\circ}20'14''$ Lt
 $D=02^{\circ}00'00''$
 $R=2864.79'$
 $T=617.75'$
 $L=1216.86'$
 $E=65.85'$
 $e=0.027' / ft$
 $e_{max}=0.04' / ft$

Curve No. 2
 PI Sta 51+29.17
 $\Delta=23^{\circ}56'48''$ Rt
 $D=2^{\circ}00'00''$
 $R=2864.79'$
 $T=607.53'$
 $L=1197.33'$
 $E=63.71'$
 $e=0.027' / ft$
 $e_{max}=0.04' / ft$

Curve No. 3
 PI Sta 73+75.31
 $\Delta=04^{\circ}14'57''$ Rt
 $D=01^{\circ}00'00''$
 $R=5729.58'$
 $T=212.56'$
 $L=424.92'$
 $E=3.94'$
 $e=NC$
 $e_{max}=0.04' / ft$

Curve No. 4
 PI Sta 79+83.56
 $\Delta=04^{\circ}19'59''$ Lt
 $D=01^{\circ}00'00''$
 $R=5729.58'$
 $T=216.75'$
 $L=433.30'$
 $E=4.10'$
 $e=NC$
 $e_{max}=0.04' / ft$

Curve No. 5
 PI Sta 19+85.91
 $\Delta=04^{\circ}10'20''$ Lt
 $D=00^{\circ}45'00''$
 $R=7639.44'$
 $T=278.27'$
 $L=556.30'$
 $E=5.07'$
 $e=NC$
 $e_{max}=0.04' / ft$

NO.	REVISION	BY	DATE

MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION

BROADWAY ROAD
43RD AVENUE TO 35TH AVENUE
PROJECT NO. 68237

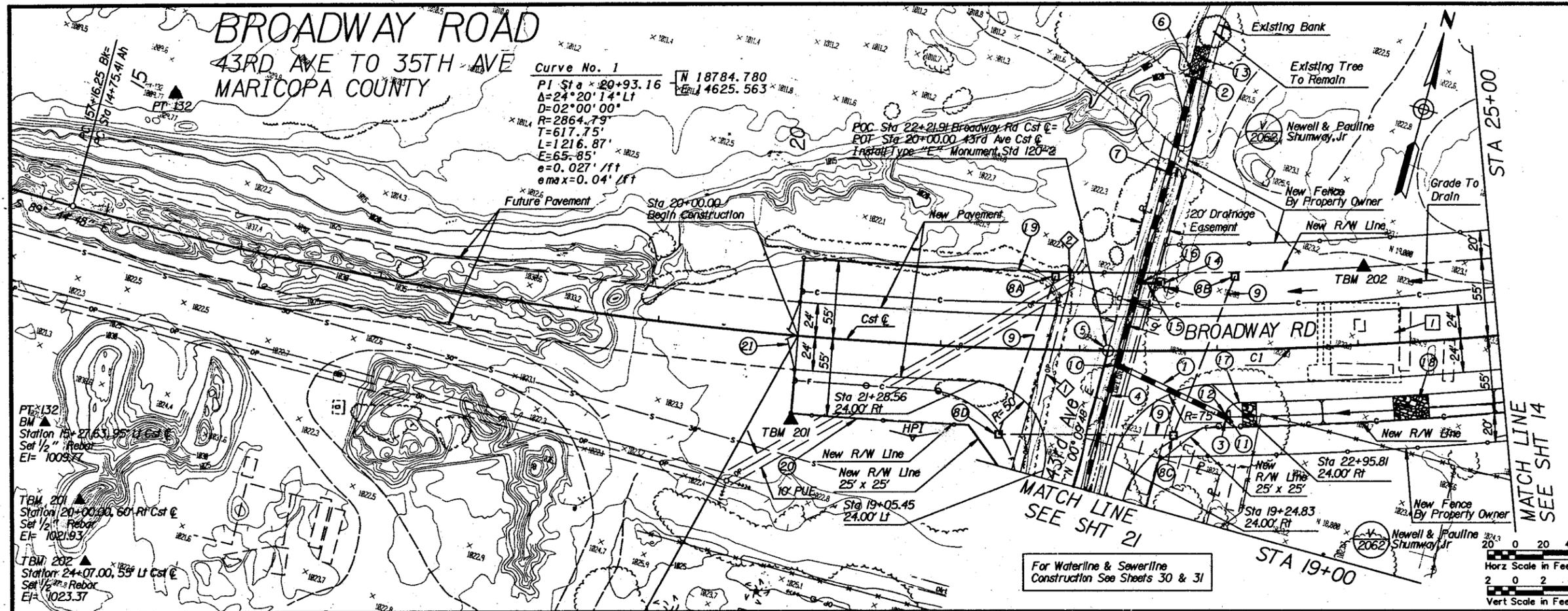
DESIGNED	BY	DATE
M. J. SCHNEIDER	M. J. SCHNEIDER	8-94
DRAWN	M. J. SCHNEIDER	8-94
CHECKED	J.H. KRAMER	8-94

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GEOMETRIC LAYOUT SHEET SHEET OF 12 44

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 11/18/94

TRACS NO.



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	13	44	

REMOVALS

REMOVE EXST CONCRETE SLAB

RELOCATIONS

OVERHEAD POWER - (BY SRP)

POWER POLE, INCLUDING GUY ANCHORS - BY (SRP)

NEW CONSTRUCTION

STA 22-29 10' RT TO STA 23-05 47.5' RT - INSTALL 84 LF 42" RGRCP

43RD AVE STA 22-02 9' RT - CONSTRUCT REINF CONC L-TYPE HEADWALL (MAG 50H-2 MOD) L-8' L-4'

STA 23-05 47.5' RT - CONSTRUCT REINFORCED CONCRETE HEADWALL MAG 50H-2 MODIFIED L-8'-0" TOP EL+1023.09

43RD AVE STA 19-00 9' RT TO 43RD AVE STA 19-90 9' RT - INSTALL 90 LF 30" RGRCP

BROADWAY STA 22-21.91, 43RD AVE STA 20-00.00 - INSTALL TYPE "E" MONUMENT (MAG-120-2)

43RD AVE STA 22-02 9' RT - INSTALL NEENAH TYPE SF 48" AUTOMATIC DRAINAGE GATE WITH CAST IRON COVER OR EQUAL

43RD AVE STA 19-94 9' RT TO 43RD AVE STA 22-02 9' RT - INSTALL 208 LF 48" RGRCP

INSTALL NO.5 PULL BOX (FOR FUTURE SIGNAL) (SEE MCDOT DETAIL SHT 37)

(A) STA 21-51.90 52' LT
(B) STA 22-13.90 52' LT
(C) STA 22-68.00 60' RT
(D) STA 21-43.90 6' RT

INSTALL 347 LF 3" PVC (FOR FUTURE SIGNAL)

43RD AVE STA 19-92 9' RT - INSTALL 48" MANHOLE (MAG 522 SHAFT, C.O.P. 1520 BASE)

BROADWAY RD STA 23-05 47.5' RT - INSTALL DOUBLE HINGED ACCESS BARRIER (C.O.P. P1563, ADOT C-13.80 REINFORCEMENT H-42" W-32")

SAWCUT AND REPAIR PIPE TO MATCH FACE OF HEADWALL (NPI)

INSTALL 15 SY PLAIN RIP RAP (SEE DETAIL SHT 7)

STA 22-57 48' LT - INSTALL TYPE "F" CATCH BASIN (MAG 535) V-3.5' W/101 MAX SLOPE AC APRON (ADOT C-15.80)

STA 22-42 48' LT TO STA 22-57 48' LT - INSTALL 15 LF 18" RGRCP

STA 22-42 48' LT - PROVIDE DRAINAGE INTO 48" RGRCP (MAG 524)

END TREATMENT CHANNEL LINING (SEE DETAIL SHT 7)

DITCH RIP RAP (SEE DETAIL SHT 7)

STA 19-99.5 24' LT TO STA 22-30 55.5' LT - INSTALL 271 LF CHAIN LINK FENCE

STA 19-99.5 24' RT TO 43RD AVE STA 19-00 55.5' LT - INSTALL 187 LF CHAIN LINK FENCE

STA 19-99.5 24' LT AND 24' RT - INSTALL 2-24" CHAIN LINK SWING GATES WITH WHEELS

PAVEMENT QUANTITIES

1	SUBGRADE PREPARATION	3214	SY.
2	AGGREGATE BASE	1627	TON
3	AC PAVEMENT (D-1/2)	264	TON
4	AC PAVEMENT (C-3/4)	440	TON

NO.	REVISION	BY	DATE

MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION

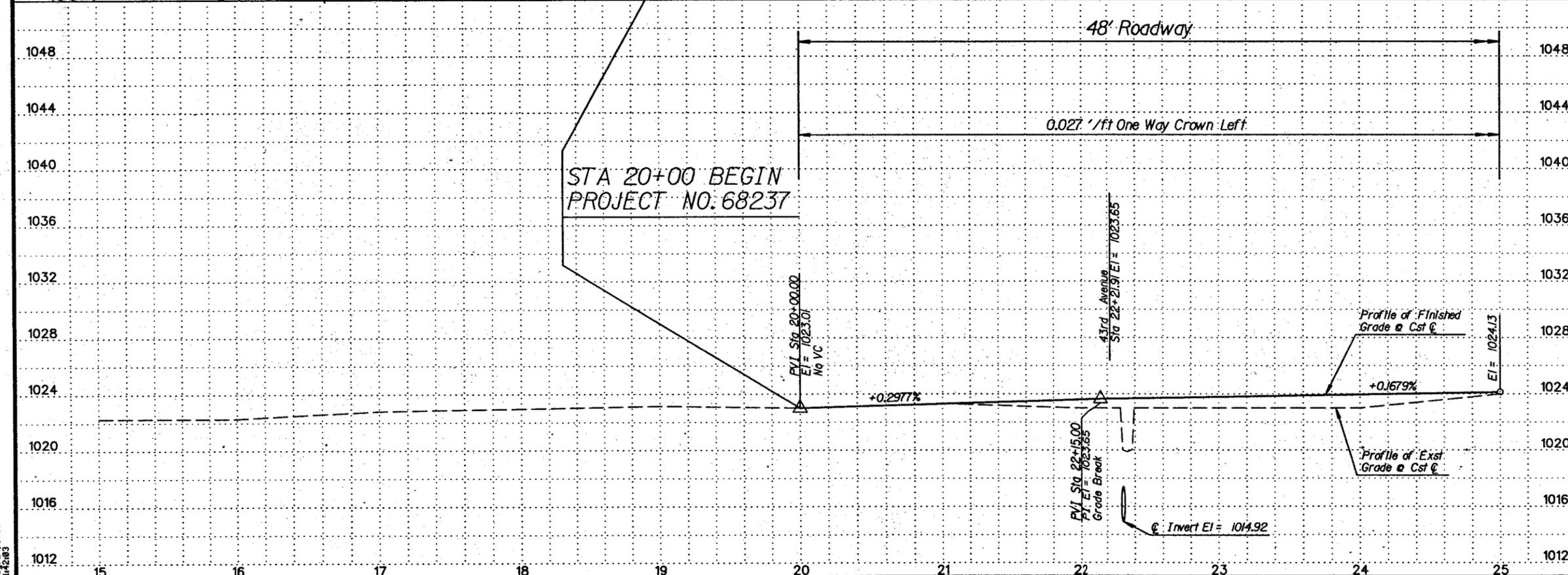
BROADWAY ROAD
43RD AVENUE TO 35TH AVENUE
PROJECT NO. 68237

DESIGNED	BY	DATE
M. J. SCHNEIDER		8-94
DRAWN	BY	DATE
M. J. SCHNEIDER		8-94
CHECKED	BY	DATE
J. H. KRAMER		8-94



PLAN & PROFILE SHEET
STA 15+00 TO STA 25+00

SHEET OF 13 44
TRACS NO.



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Aug 24, 1994
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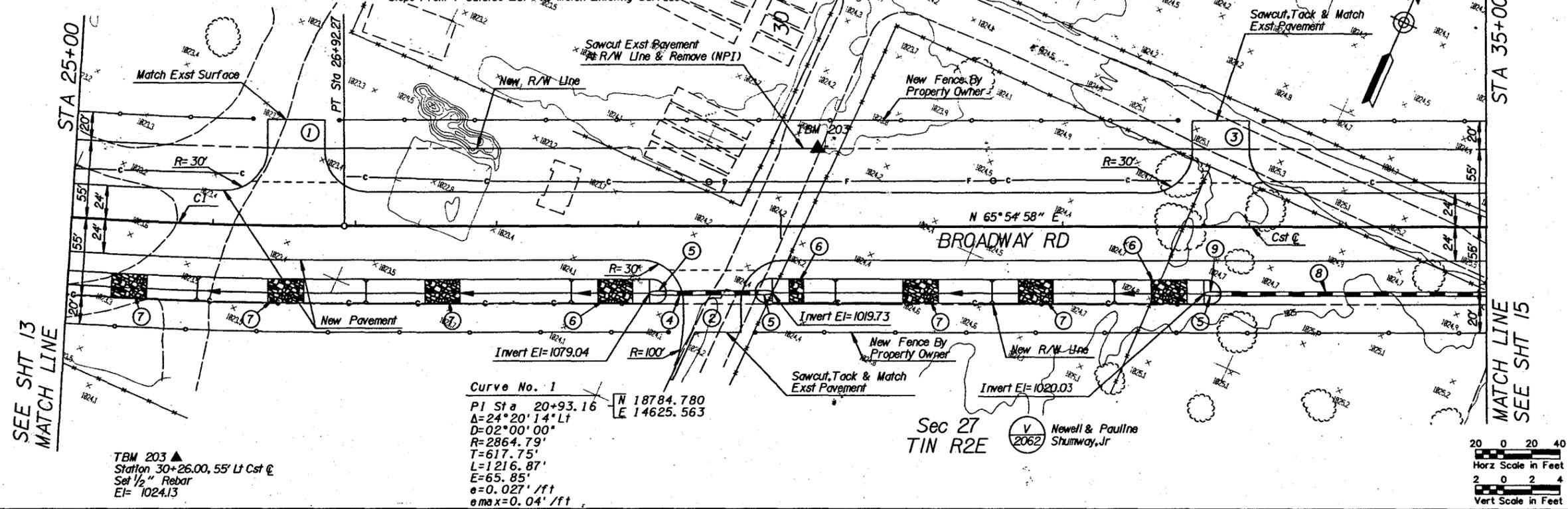
BROADWAY ROAD

43RD AVE TO 35TH AVE

MARICOPA COUNTY

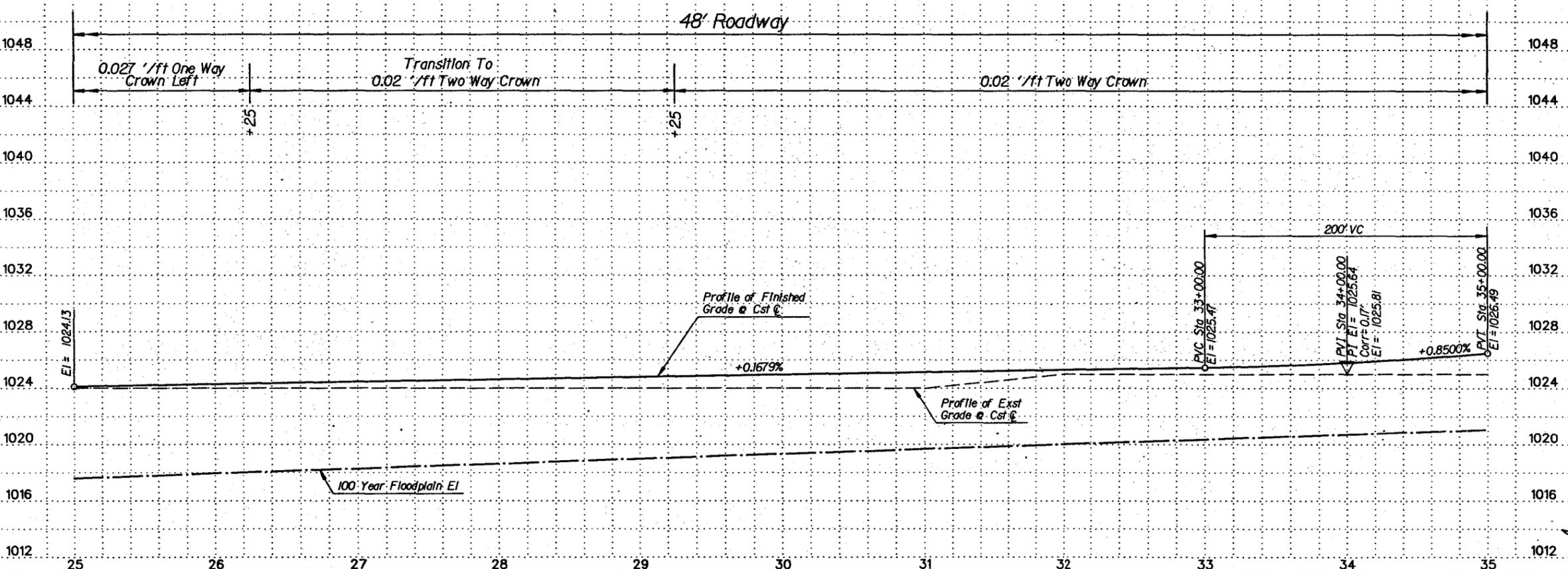
Drive No.	Cst @ Station	Drive Width	Slope	Slope ==
①	26+58 Lt	40'	-5.0%	-0.84%
②	29+52 Rt	40'	-2.0%	+2.11%
③	33+12 Lt	40'	-5.0%	+1.23%

* Slope From EOP to 7' Outside EOP
 ** Slope From 7' Outside EOP To Match Existing Surface



Curve No. 1
 PI Sta 20+93.16
 $\Delta = 24^\circ 20' 14''$ Lt
 $D = 02^\circ 00' 00''$
 $R = 2864.79'$
 $T = 617.75'$
 $L = 1216.87'$
 $E = 65.85'$
 $e = 0.027' / ft$
 $e_{max} = 0.04' / ft$

TBM 203
 Station 30+26.00, 55' Lt Cst @
 Set 1/2" Rebar
 EI = 1024.13



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	14	44	

- NEW CONSTRUCTION ○
- STA 29+08 47.5' RT TO STA 29+94 47' RT - INSTALL 86 LF 36" RGRCP
 - CUT AND REPAIR PIPE TO MATCH 3% SLOPE (SEE DETAIL SHT 7)
 - END TREATMENTS CHANNEL LINING (SEE DETAIL SHT 7)
 - DITCH RIP RAP (SEE DETAIL SHT 7)
 - STA 33+00 47.5' RT TO STA 35+00 47.5' RT - INSTALL 200 LF 36" RGRCP S-0.004'/FT
 - STA 33+00 47.5' RT - INSTALL DOUBLE HINGED ACCESS BARRIER (COP P1563, ADOT C-13.80 REINFORCEMENT) H-98" W-32"

○ NEW AC DRIVEWAY ENTRANCE ○

NO	STATION	WIDTH	RADIUS	MAG	STD	DETAIL
①	26+58 LT	40'	30'			205 TYPE 'C'
②	29+52 RT	40'	30'			205 TYPE 'C'
③	33+12 LT	40'	30'			205 TYPE 'C'

QUANTITIES ARE INCLUDED ON THE PAVEMENT QUANTITIES.

PAVEMENT QUANTITIES

1	SUBGRADE PREPARATION	643	SY.
2	AGGREGATE BASE	310	TON
3	AC PAVEMENT (D-1/2)	504	TON
4	AC PAVEMENT (C-3/4)	841	TON

NO.	REVISION	BY	DATE

MARICOPA COUNTY
 DEPARTMENT OF TRANSPORTATION
 ENGINEERING DIVISION

BROADWAY ROAD
 43RD AVENUE TO 35TH AVENUE
 PROJECT NO. 68237

DESIGNED	BY	DATE
M. J. SCHNEIDER	M. J. SCHNEIDER	8-94
M. J. SCHNEIDER	M. J. SCHNEIDER	8-94
J. H. KRAMER	J. H. KRAMER	8-94

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PLAN & PROFILE SHEET
 STA 25+00 TO STA 35+00

SHEET OF 14 44

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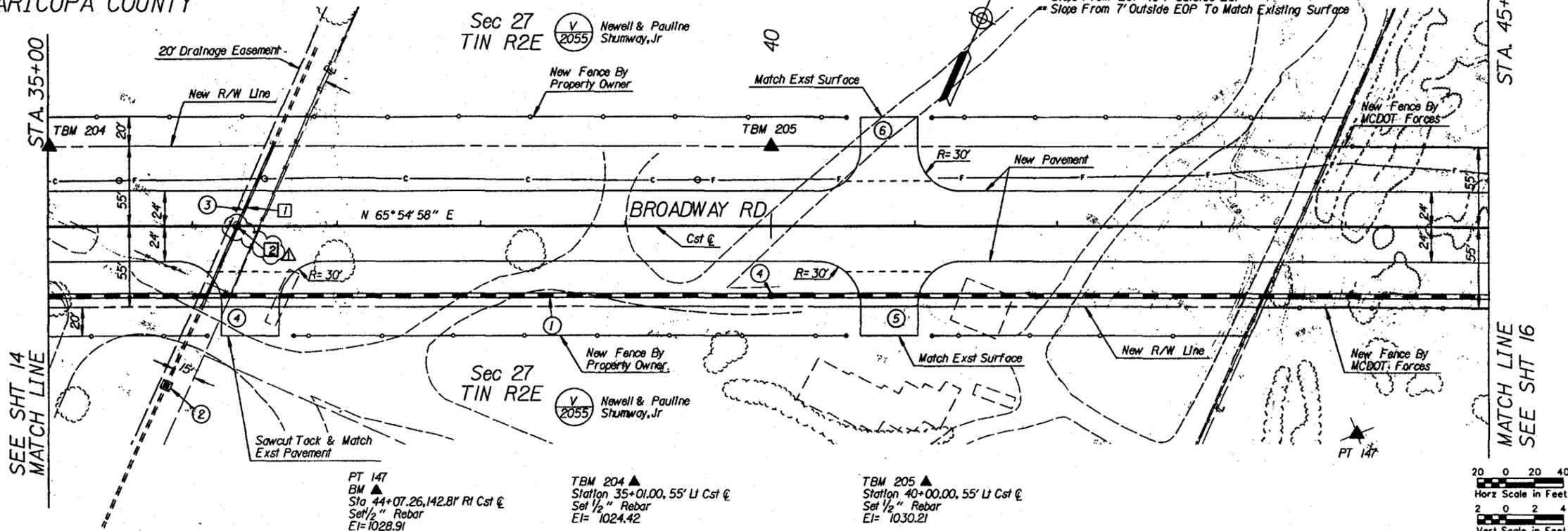
TRACS NO.

BROADWAY ROAD

43RD AVE TO 35TH AVE
MARICOPA COUNTY

Drive No.	Cst @	Station	Drive Width	Slope %	Slope #
④	36+40 Rt	40'	40'	-5.0%	-3.07%
⑤	40+82 Rt	40'	40'	-2.0%	+0.68%
⑥	40+82 Lt	40'	40'	-5.0%	+1.52%

* Slope From EOP to 7' Outside EOP
* Slope From 7' Outside EOP To Match Existing Surface



PT 147
BM
Sta 44+07.26, 142.81' RI Cst @
Set 1/2" Rebar
EI=1028.91

TBM 204
Station 35+01.00, 55' LI Cst @
Set 1/2" Rebar
EI=1024.42

TBM 205
Station 40+00.00, 55' LI Cst @
Set 1/2" Rebar
EI=1030.21

SEE SHT 14
MATCH LINE

MATCH LINE
SEE SHT 16

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	15	44	

NO	STATION TO STATION	DESCRIPTION	QTY	UNIT
1	36+06 55' RT - 36+57 55' LT	CONCRETE PIPE 12" LF		
2	STA 36+30	CONCRETE MANHOLE & JUNCTION BOX		

- NEW CONSTRUCTION**
- ① STA 35+00 47.5' RT TO STA 45+00 47.5' RT - INSTALL 1000 LF 36" RGRCP S-0.004/FT
 - ② STA 35+82, APPROX 105' RT - INSTALL TYPE "F" (MAG 535) CATCH BASIN V-3' AT EXISTING OPENING IN PIPE W/10' MAX SLOPE AC APRON (ADOT C-15.80)
 - ③ STA 36+06 55' RT TO STA 36+57 55' LT - INSTALL 12' LF 18" RGRCP (MATCH EXISTING AT BOTH ENDS)
 - ④ STA 40+00 47.5' RT - INSTALL 48" MANHOLE (MAG 522 SHAFT C.D.P. P1520 BASE)

- NEW AC DRIVEWAY ENTRANCE**
- | NO | STATION | WIDTH | RADIUS | MAG | STD DETAIL |
|----|----------|-------|--------|-----|------------|
| ④ | 36+40 RT | 40' | 30' | 205 | TYPE "C" |
| ⑤ | 40+82 RT | 40' | 30' | 205 | TYPE "C" |
| ⑥ | 40+82 LT | 40' | 30' | 205 | TYPE "C" |
- QUANTITIES ARE INCLUDED ON THE PAVEMENT QUANTITIES.

PAVEMENT QUANTITIES

NO	DESCRIPTION	QTY	UNIT
1	SUBGRADE PREPARATION	643	SY.
2	AGGREGATE BASE	310	TON
3	AC PAVEMENT (D-1/2)	504	TON
4	AC PAVEMENT (C-3/4)	841	TON

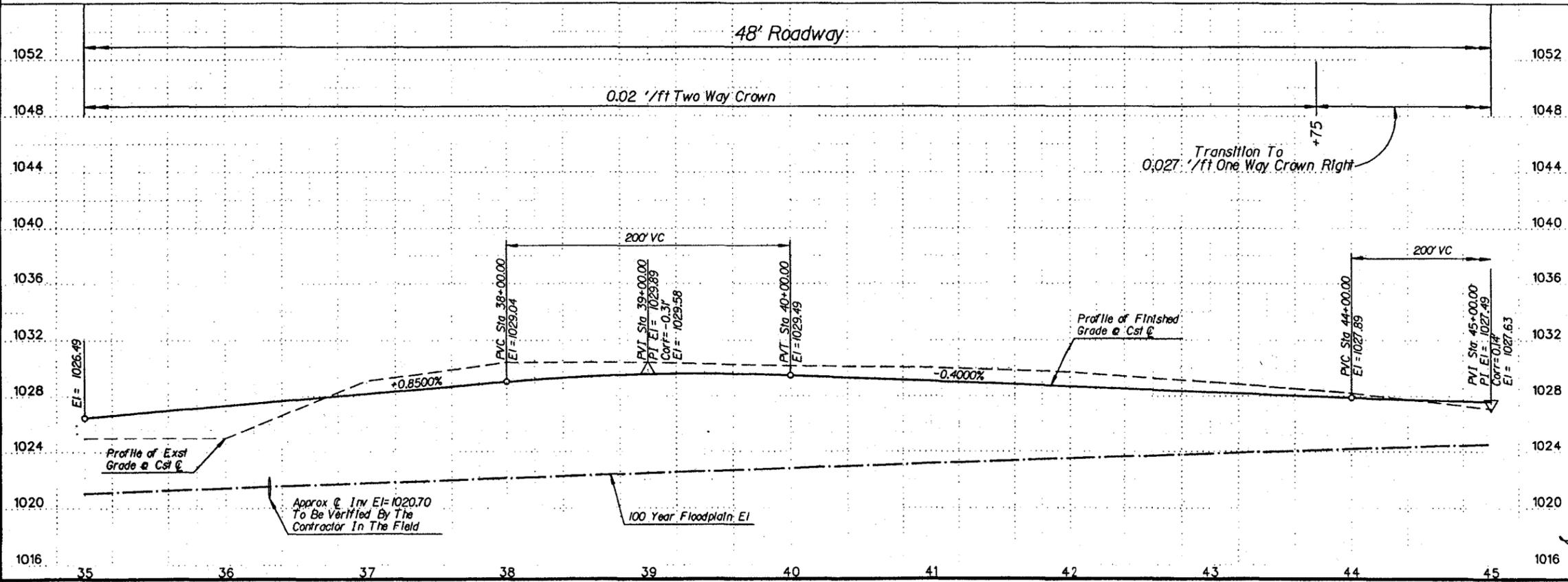
NO.	REVISION	C.R.W.	DATE
1	ADDENDUM NO. 1		10/5/95

MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION

BROADWAY ROAD
43RD AVENUE TO 35TH AVENUE
PROJECT NO. 68237

BY	DATE
DESIGNED M. J. SCHNEIDER	8-94
DRAWN M. J. SCHNEIDER	8-94
CHECKED J. H. KRAMER	8-94

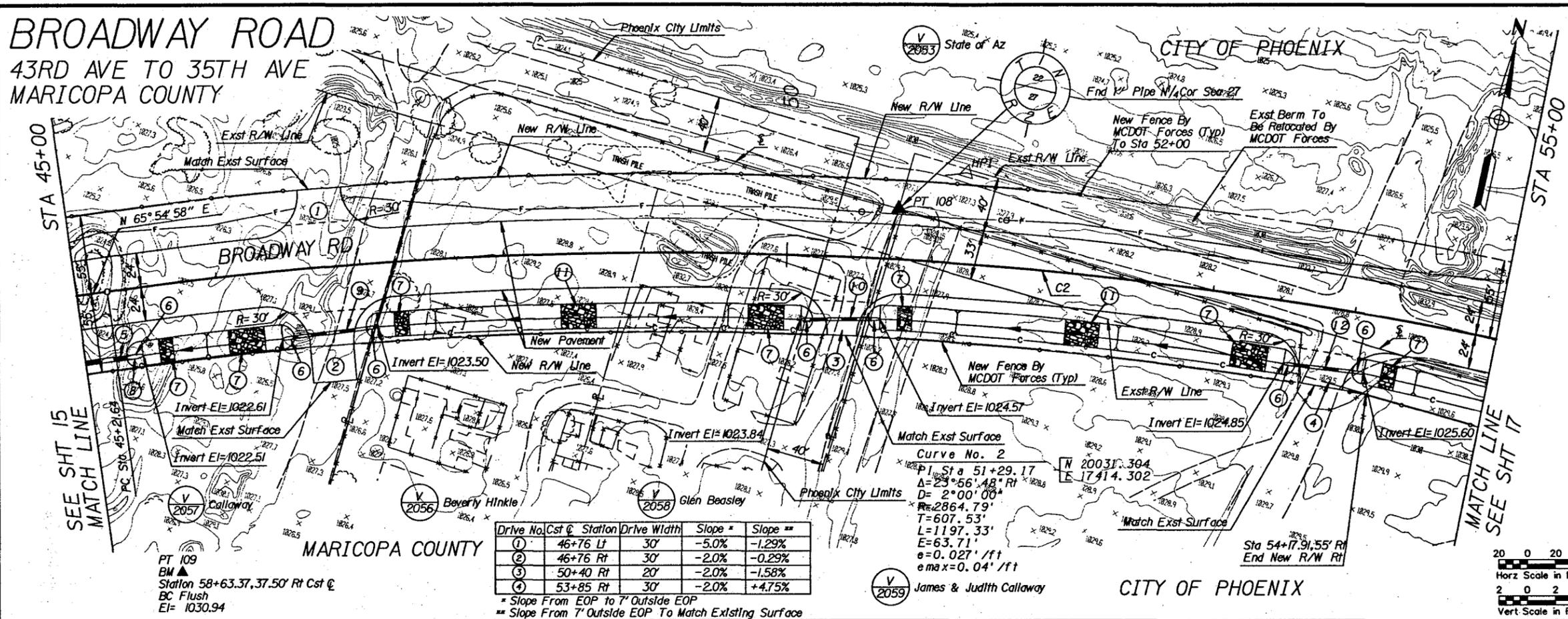
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BROADWAY ROAD

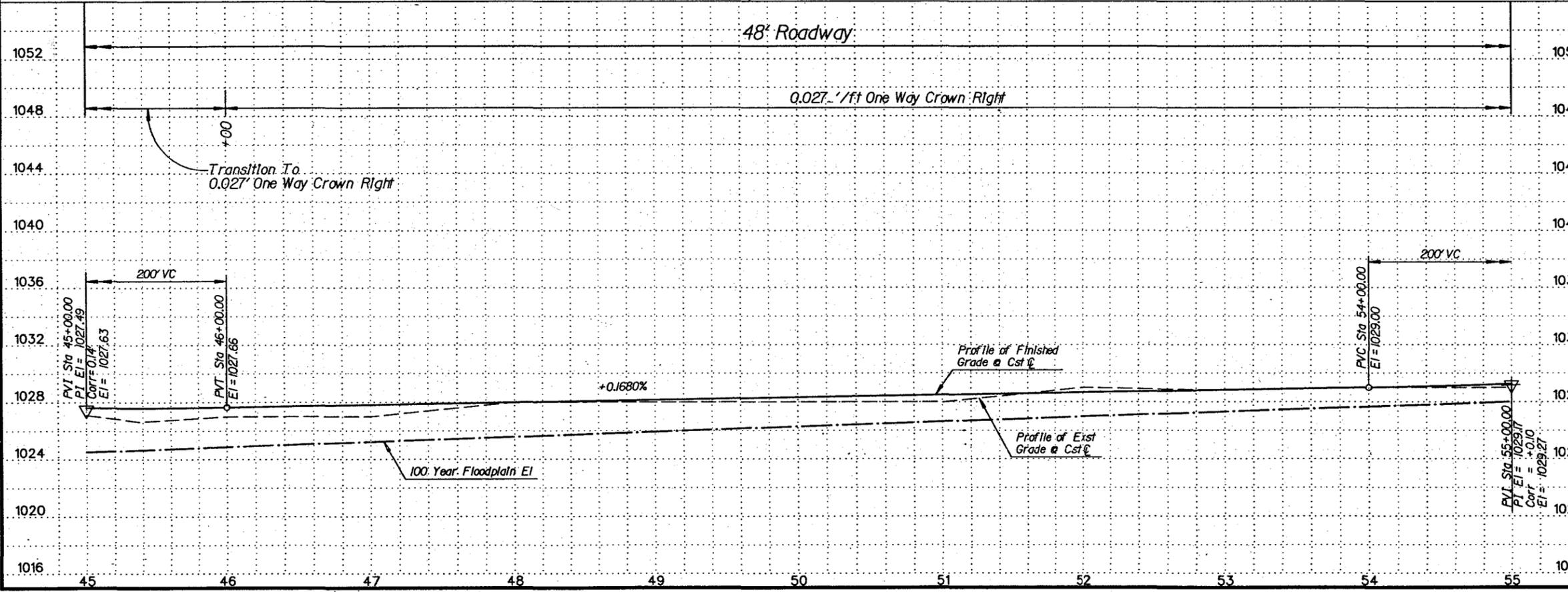
43RD AVE TO 35TH AVE
MARICOPA COUNTY



Drive No.	Cst @	Station	Drive Width	Slope %	Slope "
①	46+76 Lt		30'	-5.0%	-1.29%
②	46+76 Rt		30'	-2.0%	-0.29%
③	50+40 Rt		20'	-2.0%	-1.58%
④	53+85 Rt		30'	-2.0%	+4.75%

* Slope From EOP to 7' Outside EOP
** Slope From 7' Outside EOP To Match Existing Surface

Curve No. 2
 PI Sta 51+29.17
 $\Delta = 23^\circ 56' 48''$ Rt
 $D = 2^\circ 00' 00''$
 $R = 2864.79'$
 $T = 607.53'$
 $L = 1197.33'$
 $E = 63.71'$
 $e = 0.027' / ft$
 $e m a x = 0.04' / ft$



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	16	44	

NEW CONSTRUCTION

- STA 45+00 47.5' RT TO STA 45+41 47.5' RT - INSTALL 41 LF 36" RGRCP
- CUT AND REPAIR PIPE TO MATCH 3/4 SLOPE (SEE DETAIL SHT 7)
- END TREATMENTS CHANNEL LINING (SEE DETAIL SHT 7)
- STA 45+41 47.5' RT - INSTALL DOUBLE HINGED ACCESS BARRIER (COP P1563, ADOT C-13.80 REINFORCEMENT) H=96" W=32"
- STA 46+41 47.5' RT TO STA 47+09 44.5' RT - INSTALL 68 LF 24" RGRCP
- STA 50+11 45' RT TO STA 50+66.5 42.5' RT - INSTALL 56 LF 24" RGRCP
- DITCH RIP RAP (SEE DETAIL SHT 7)
- STA 53+55.5 43.5' RT TO STA 54+13 41' RT - INSTALL 58 LF 24" RGRCP

NEW AC DRIVEWAY ENTRANCE

NO	E STATION	WIDTH	RADIUS	MAG STD DETAIL
①	46+76 LT	30'	30'	205 TYPE 'C'
②	46+76 RT	30'	30'	205 TYPE 'C'
③	50+40 RT	20'	30'	205 TYPE 'C'
④	53+85 RT	30'	30'	205 TYPE 'C'

QUANTITIES ARE INCLUDED ON THE PAVEMENT QUANTITIES.

PAVEMENT QUANTITIES

NO	DESCRIPTION	AMOUNT	UNIT
1	SUBGRADE PREPARATION	5964	SY.
2	AGGREGATE BASE	3020	TON
3	AC.PAVEMENT (D-1/2)	490	TON
4	AC.PAVEMENT (C-3/4)	817	TON

NO.	REVISION	BY	DATE

MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION

BROADWAY ROAD
43RD AVENUE TO 35TH AVENUE
PROJECT NO. 68237

DESIGNED	BY	DATE
M. J. SCHNEIDER	M. J. SCHNEIDER	8-94
M. J. SCHNEIDER	M. J. SCHNEIDER	8-94
J. H. KRAMER	J. H. KRAMER	8-94

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PLAN & PROFILE SHEET
STA 45+00 TO STA 55+00
SHEET OF 16 44

MC21884 45th
Aug 24 1994
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TRACS NO.

BROADWAY ROAD

43RD AVE TO 35TH AVE
MARICOPA COUNTY

CITY OF PHOENIX

Sec 22
TIN R2E

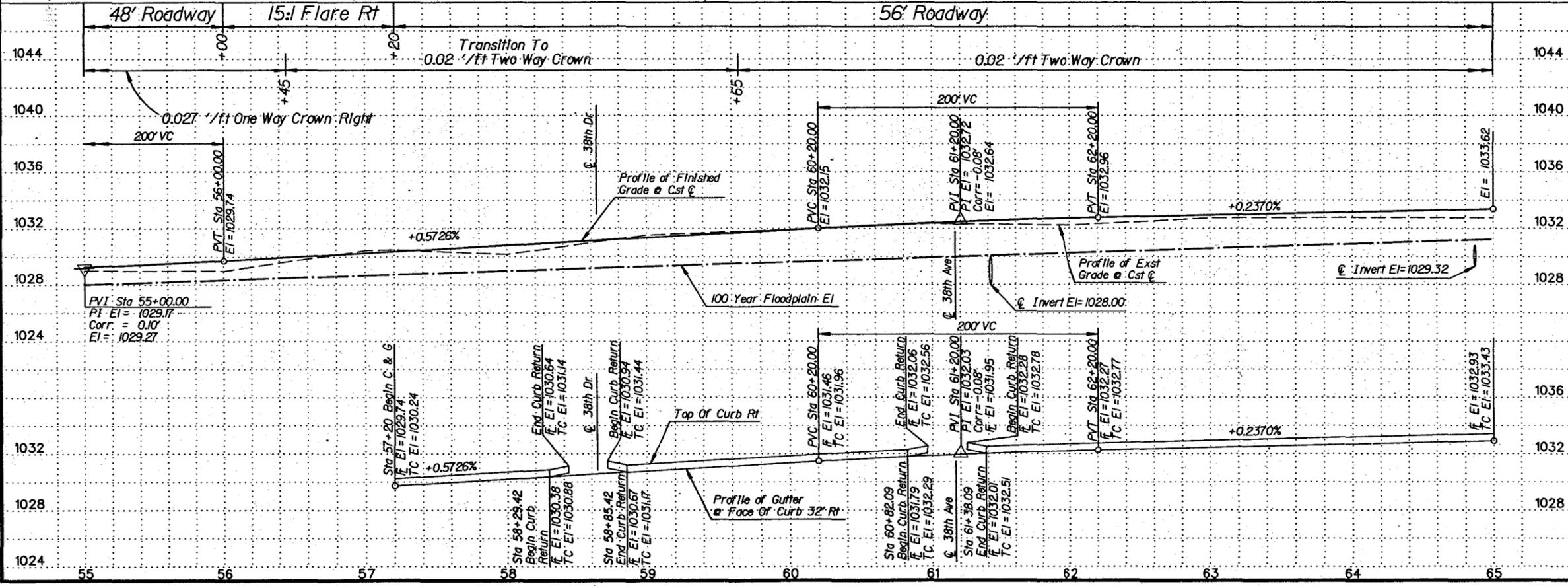
CITY OF PHOENIX
Sec 27
TIN R2E

STA 55+00

STA 65+00

SEE SHT 16
MATCH LINE

MATCH LINE
SEE SHT 18



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	17	44	

REMOVALS					
NO	STATION TO STATION	DESCRIPTION	QTY	UNIT	
1	61+56 62' RT	61+69 62' RT	EXST C & G	13	LF
2	64+81 62' RT	64+94 62' RT	EXST C & G	13	LF

NEW CONSTRUCTION - CURB GUTTER					
NO	STATION TO STATION	TYPE	QTY	UNIT	
1	57+18.97 32' RT	58+31 4' RT	220-A	124.6'	LF
2	57+20 4' RT	58+31 4' RT	222-A	111'	LF
3	57+20 4' RT	57+45 61.5' RT	220-A	57.2'	LF
4	58+83 4' RT	60+84 4' RT	220-A	224.9'	LF
5	58+83 4' RT	60+84 4' RT	222-A	201'	LF
6	61+36 4' RT	65+00 32' RT	220-A	358.9'	LF
7	61+36 4' RT	65+00 4' RT	222-A	364'	LF

- 8) STA 61+45 32' RT TO STA 61+45 43.5' LT - INSTALL 76' LF 18" RGRCP
- 9) STA 61+45 32' RT - INSTALL TYPE "M" (COP 1569-I) CATCH BASIN L-6 V-4
- 10) STA 61+45 34.75' RT TO STA 61+63 60' RT - INSTALL 31' LF 18" RGRCP
- 11) STA 61+63 60' RT - INSTALL TYPE "M" (COP 1569-I) CATCH BASIN L-6 V-3
- 12) STA 57+09.75 51.25' RT - INSTALL CONCRETE SCUPPER (MAG 206J, 206.2) WITH 10" SPILLWAY (SEE SHT 24)
- 13) STA 63+15 43.5' LT - INSTALL DOUBLE HINGED ACCESS BARRIER (C.O.P. P1563, ADOT C-13.80 REINFORCEMENT) H-86" W-32"
- 14) STA 63+15 140' LT - INSTALL OUTLET TYPE "U" HEADWALL (MAG 501-12)
- 15) STA 63+15 43.5' LT TO STA 63+15 140' LT - INSTALL 96' LF 30" RGRCP @ 5-0.0025' / FT
- 16) STA 57+35 60' RT - CONSTRUCT 170 SF OF ALLEY ENTRANCE (COP-P1255)
- 17) END TREATMENTS CHANNEL LINING (SEE DETAIL SHT 7)
- 18) STA 58+31 36.5' RT TO STA 58+83 36.5' RT - INSTALL 52 LF 3" SCH 40 PVC WITH CAPED ENDS
- 19) STA 60+84 36.5' RT TO STA 61+36 36.5' RT - INSTALL 52 LF 3" SCH 40 PVC WITH CAPED ENDS
- 20) STA 63+15 140' LT - INSTALL NEENAH TYPE SF 30" AUTOMATIC DRAINAGE GATE WITH CAST IRON COVER OR EQUAL
- 21) CUT AND REPAIR PIPE TO MATCH 3:1 SLOPE (SEE DETAIL SHT 7)
- 22) STA 64+87 32' RT TO STA 66+87 43.5' LT - INSTALL 76' LF 18" RGRCP
- 23) STA 64+87 32' RT - INSTALL TYPE "M" (COP 1569-I) CATCH BASIN L-6 V-4
- 24) STA 64+87 34.75' RT TO STA 64+87 60' RT - INSTALL 26' LF 18" RGRCP
- 25) STA 64+87 60' RT - INSTALL TYPE "M" (COP 1569-I) CATCH BASIN L-6 V-3
- 26) INSTALL 8 SY PLAIN RIP RAP (SEE DETAIL SHT 7)
- 27) DITCH RIP RAP (SEE DETAIL SHT 7)

PAVEMENT QUANTITIES			
1	SUBGRADE PREPARATION	6072	SY.
2	AGGREGATE BASE	3074	TON
3	AC PAVEMENT (D-1/2)	499	TON
4	AC PAVEMENT (C-3/4)	831	TON

REVISION BY DATE

MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION

BROADWAY ROAD
43RD AVENUE TO 35TH AVENUE
PROJECT NO. 68237

DESIGNED	BY	DATE
M. J. SCHNEIDER	M. J. SCHNEIDER	8-94
M. J. SCHNEIDER	M. J. SCHNEIDER	8-94
J. H. KRAMER	J. H. KRAMER	8-94

PLAN & PROFILE SHEET
STA 55+00 TO STA 65+00
TRACS NO. 17 44

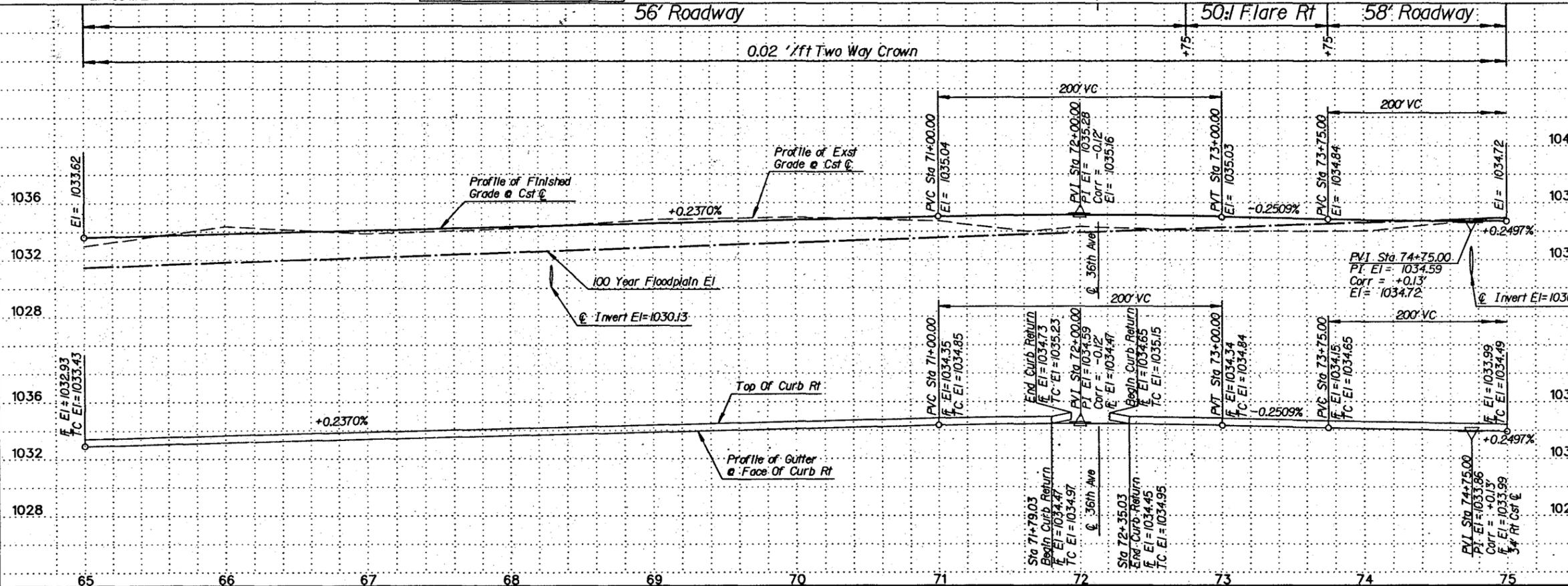
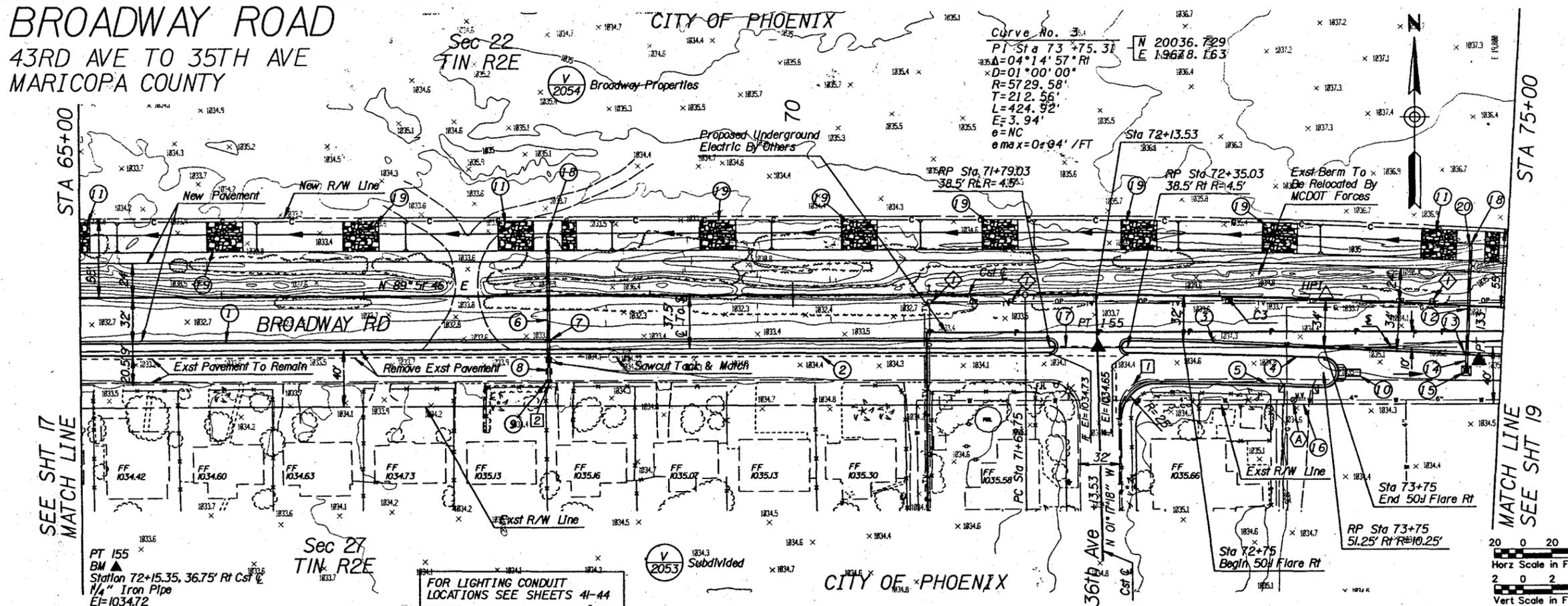
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BROADWAY ROAD

43RD AVE TO 35TH AVE
MARICOPA COUNTY



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	18	44	

NO	STATION TO STATION	DESCRIPTION	QTY	UNIT
1	72-30 87' RT	73-25 58' RT	CURB & GUTTER	120 LF
2	66-74 60' RT	66-88 60' RT	CURB & GUTTER	14 LF

- REMOVALS
- RELOCATIONS
- POWER POLE, WIRES, & GUY ANCHORS - BY OTHERS 3 EACH
- ADJUSTMENT TO GRADE
- WATER VALVE, BOX & COVER (MAG 39H-KA) 1 EACH

NO	STATION TO STATION	TYPE	QTY	UNIT
1	65+00 32' RT	7+81 4' RT	220-A	695.2' LF
2	65+00 4' RT	7+81 4' RT	222-A	68' LF
3	72-33 4' RT	75+00 3' RT	220-A	281.2' LF
4	72-33 4' RT	73-75 4' RT	222-A	142' LF
5	73-75 4' RT	72-28 83' RT	220-A	193' LF

- NEW CONSTRUCTION - CURB GUTTER
- NEW CONSTRUCTION
- 6 STA 68-29 32' RT TO STA 68-29 43.5' LT - INSTALL 76 LF 18" RGRCP
 - 7 STA 68-29 32' RT - INSTALL TYPE "M" CATCH BASIN (C.D.P. P1569-I) CATCH BASIN L-6' V-4'
 - 8 STA 68-29 34.75' RT TO STA 68-29 60' RT - INSTALL 26 LF 18" RGRCP
 - 9 STA 68-29 60' RT - INSTALL TYPE "M" (C.D.P. P1569-I) CATCH BASIN L-6' V-3'
 - 10 STA 73-85 50' RT - INSTALL CONCRETE SCUPPER (MAG 206J - 206.2) (SEE SHT 24)
 - 11 END TREATMENTS CHANNEL LINING (SEE DETAIL SHT 7)
 - 12 STA 74-75 3' RT TO STA 74-75 43.5' LT - INSTALL 78 LF 24" RGRCP
 - 13 STA 74-75 3' RT - INSTALL TYPE "M" (C.D.P. - 1569-I) CATCH BASIN L-6' V-4'
 - 14 STA 74-75 49.5' RT TO STA 74-75 36.5' RT - INSTALL 13 LF 18" RGRCP
 - 15 STA 74-75 49.5' RT - INSTALL TYPE "F" (MAG 535) CATCH BASIN V-3' W/10% MAX SLOPE AC APRON (ADOT C-15.80)
 - 16 STA 73-59.2 60' RT - CONSTRUCT ALLEY ENTRANCE 20' WIDE (C.D.P. P1255)
 - 17 STA 7+81 38.5' RT TO STA 72-33 38.5' RT - INSTALL 52 LF 3" SCH 40 PVC WITH CAPPED ENDS
 - 18 CUT AND REPAIR PIPE TO MATCH 3/4 SLOPE (SEE DETAIL SHT 7)
 - 19 DITCH RIP RAP (SEE DETAIL SHT 7)
 - 20 STA 74-75 43.5' LT - INSTALL DOUBLE HINGED ACCESS BARRIER (C.D.P. P1563, ADOT C-13.80 REINFORCEMENT) H-92" W-32"

PAVEMENT QUANTITIES

1	SUBGRADE PREPARATION	6262	SY.
2	AGGREGATE BASE	3170	TON
3	AC PAVEMENT (1-1/2)	515	TON
4	AC PAVEMENT (1-3/4)	857	TON

NO.	REVISION	BY	DATE

MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION

BROADWAY ROAD
43RD AVENUE TO 35TH AVENUE
PROJECT NO. 68237

DESIGNED	M. J. SCHNEIDER	8-94
DRAWN	M. J. SCHNEIDER	8-94
CHECKED	J. H. KRAMER	8-94

PLANNED & PROFILE SHEET
STA 65+00 TO STA 75+00
SHEET OF 18 44

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Aug. 24, 1994
12:31:51

TRACS NO.

BROADWAY ROAD

43RD AVE TO 35TH AVE
MARICOPA COUNTY

CITY OF PHOENIX

POT Sta 76+92.13 Broadway Rd Cst @
POC 20+00 35th Ave Cst @
Install Type "D" Monument, Std 120-2

Sta 20+61.10, 24.00' Rt
End Curb & Gutter
Begin Curb
Termination Std 222

Sta 76+98.75, 13.56' Rt of
Broadway Rd Cst @
End Type "E" Monument,
Std 120-2, Replace

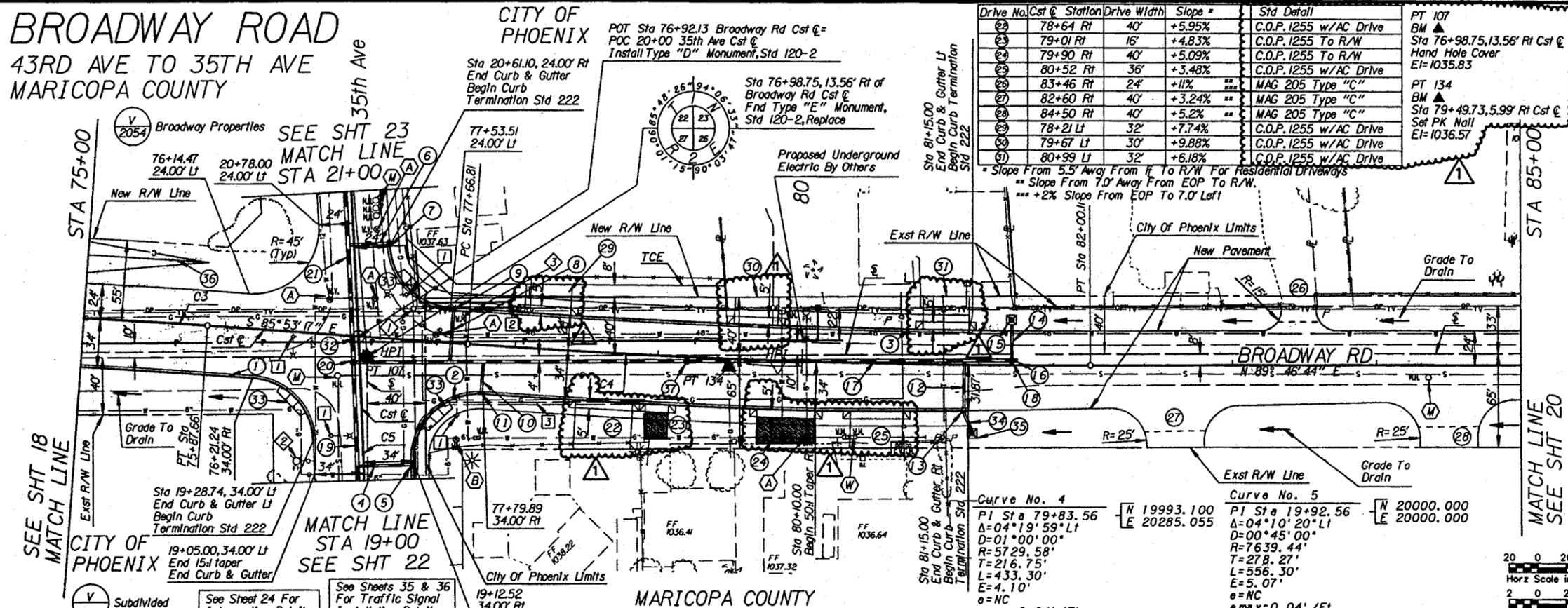
Sta 81+15.00
End Curb & Gutter Lt
Begin Curb Termination
Std 222

PT	Station	Drive Width	Slope	Std Detail
107	78+64 Rt	40'	+5.95%	C.O.P. 1255 w/AC Drive
108	79+01 Rt	16'	+4.83%	C.O.P. 1255 To R/W
109	79+90 Rt	40'	+5.09%	C.O.P. 1255 To R/W
110	80+52 Rt	36'	+3.48%	C.O.P. 1255 w/AC Drive
111	83+46 Rt	24'	+1.1%	MAG 205 Type "C"
112	82+60 Rt	40'	+3.24%	MAG 205 Type "C"
113	84+50 Rt	40'	+5.2%	MAG 205 Type "C"
114	78+21 Lt	32'	+7.74%	C.O.P. 1255 w/AC Drive
115	79+67 Lt	30'	+9.88%	C.O.P. 1255 w/AC Drive
116	80+99 Lt	32'	+6.18%	C.O.P. 1255 w/AC Drive

PT 107
BM
Sta 76+98.75, 13.56' Rt Cst @
Hand Hole Cover
EI=1035.83

PT 134
BM
Sta 79+49.73, 5.99' Rt Cst @
Set PK Nail
EI=1036.57

* Slope From 5.5' Away From It To R/W For Residential Driveways
** Slope From 7.0' Away From EOP To R/W
*** +2% Slope From EOP To 7.0' Left



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	19	44	

NO	STATION TO STATION	DESCRIPTION	QTY	UNIT
REMOVALS				
1	VARIOUS	POLE FOUNDATIONS	4	EA
2	77-26 62' LT	77-95 30' LT BLOCK FENCE	140	LF
3	77-37 93' RT	78-90 34' RT CURB & GUTTER	200	LF

NO	STATION TO STATION	DESCRIPTION	QTY	UNIT
RELOCATIONS				
1		OVERHEAD POWER, POWER POLE, AND GUY ANCHORS - BY OTHERS		
2		FIRE HYDRANT TO 35TH AVE STA 19+15 46.5' LT	1	EACH
3		WATER METER	1	EACH

NO	STATION TO STATION	DESCRIPTION	QTY	UNIT
ADJUSTMENT TO GRADE				
A		WATER VALVE, BOX & COVER, (MAG 39H-A)	5	EACH
B		WATER VALVE, BOX & COVER, (MAG 39H-B)	1	EACH
M		MANHOLE, MAG 422	5	EACH
W		WATER METER	1	EACH

NO	STATION TO STATION	TYPE	QTY	UNIT
NEW CONSTRUCTION - CURB GUTTER				
1	BROADWAY 35th AVENUE 75+00 34' RT 19+28.74 34' LT	220-A	184'	LF
2	35th AVENUE BROADWAY 19+00 34' RT 8+10 32' RT	220-A	422'	LF
3	35th AVENUE BROADWAY 20+61 24' RT 8+20 24' RT	220-A	429'	LF

NO	STATION TO STATION	DESCRIPTION	QTY	UNIT
NEW CONSTRUCTION				
4	35th AVENUE STA 19+10 34' RT TO STA 19+10 3' LT	INSTALL 37' LF 18" RGRCP		
5	35th AVENUE STA 19+10 32' RT - INSTALL TYPE "M" CATCH BASIN (C.O.P. P1569-1) V-3'-6" L-6"			
6	35th AVENUE STA 20+62 24' RT TO STA 20+62 3' LT	INSTALL 32' LF 18" RGRCP		
7	35th AVENUE STA 20+62 24' RT - INSTALL TYPE "M" CATCH BASIN (C.O.P. P1569-1) V-3'-6" L-6"			
8	BROADWAY STA 77-55 22' LT TO STA 77-55 10.5' RT	INSTALL 33' LF 18" RGRCP		
9	BROADWAY STA 77-55 22' LT - INSTALL TYPE "M" CATCH BASIN (C.O.P. P1569-1) V-3'-6" L-6"			
10	BROADWAY STA 77-78 32' RT TO STA 77-78 12.5' RT	INSTALL 20' LF 18" RGRCP		
11	BROADWAY STA 77-78 32' RT - INSTALL TYPE "M" (C.O.P. P1569-1) CATCH BASIN V-3'-6" L-6"			
12	BROADWAY STA 8+10 32' RT TO STA 8+10 3' LT	INSTALL 35' LF 18" RGRCP		
13	BROADWAY STA 8+12 32' RT - INSTALL TYPE "M" CATCH BASIN (C.O.P. P1569-1) V-3'-6" L-6"			
14	BROADWAY STA 8+45 30' LT TO STA 8+45 6' LT	INSTALL 24' LF 18" RGRCP		
15	BROADWAY STA 8+45 30' LT - INSTALL TYPE "M" CATCH BASIN (MAG 535) V-3' W/10% MAX SLOPE AC APRON (ADOT C-15.80)			
16	BROADWAY STA 8+47 4' LT - INSTALL 2" STUB OUT & PLUG (MAG 427)			

FOR ADDITIONAL NOTES AND QUANTITIES SEE SHEET 20

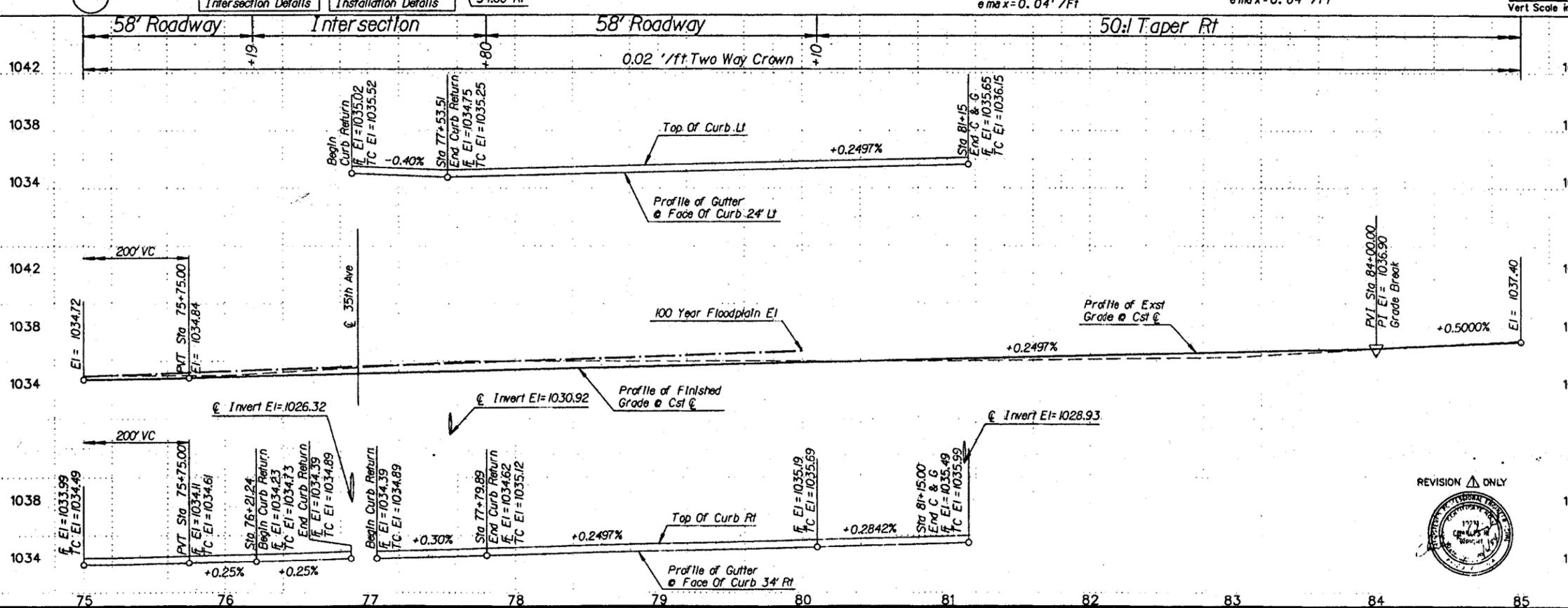
REVISION	CRW	10/5/94
NO.	BY	DATE

MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION

BROADWAY ROAD
43RD AVENUE TO 35TH AVENUE
PROJECT NO. 68237

BY	DATE
DESIGNED M. J. SCHNEIDER	8-94
DRAWN M. J. SCHNEIDER	8-94
CHECKED J. H. KRAMER	8-94

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NC21087-401
Rev. 24, 1994
12/4/2013

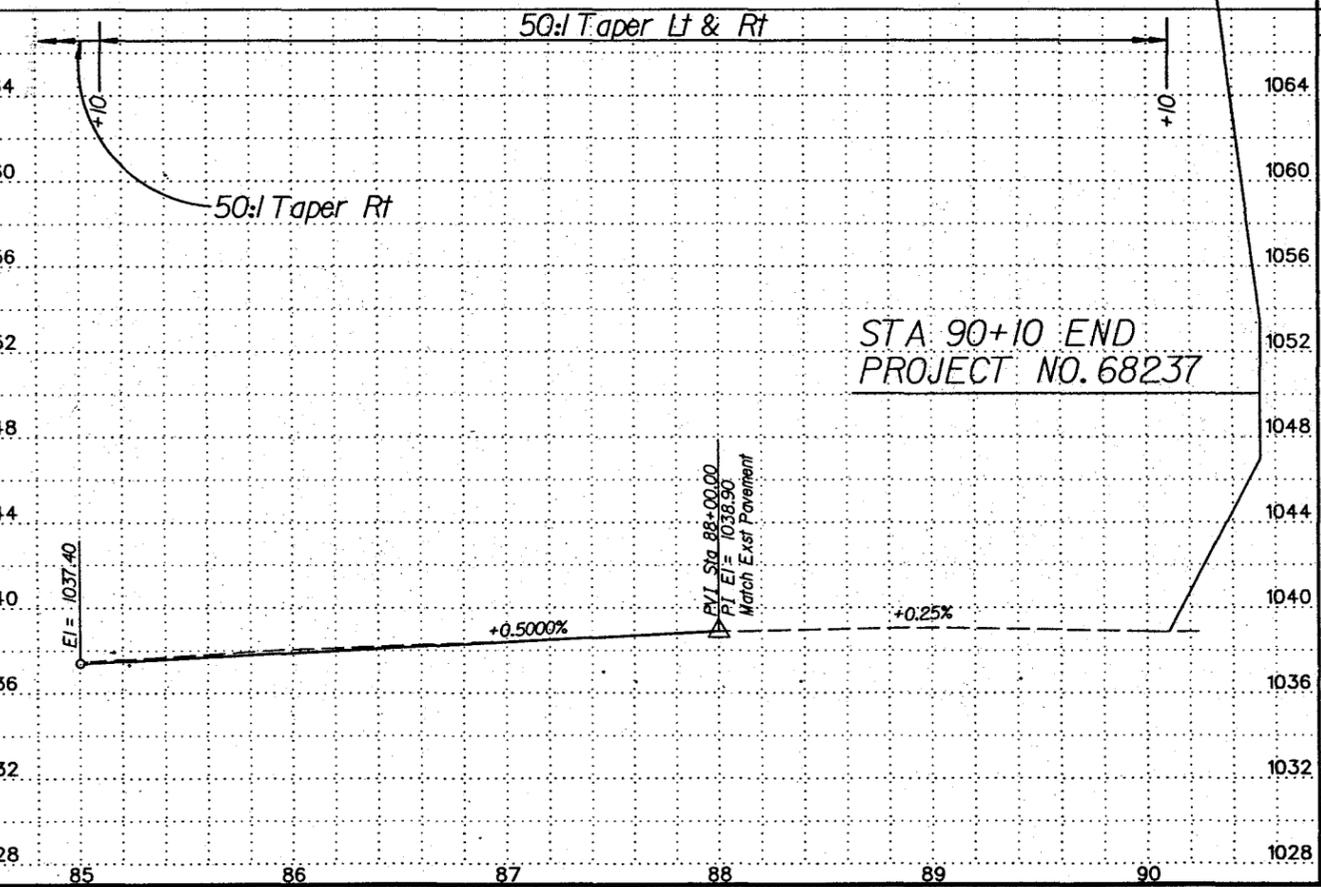
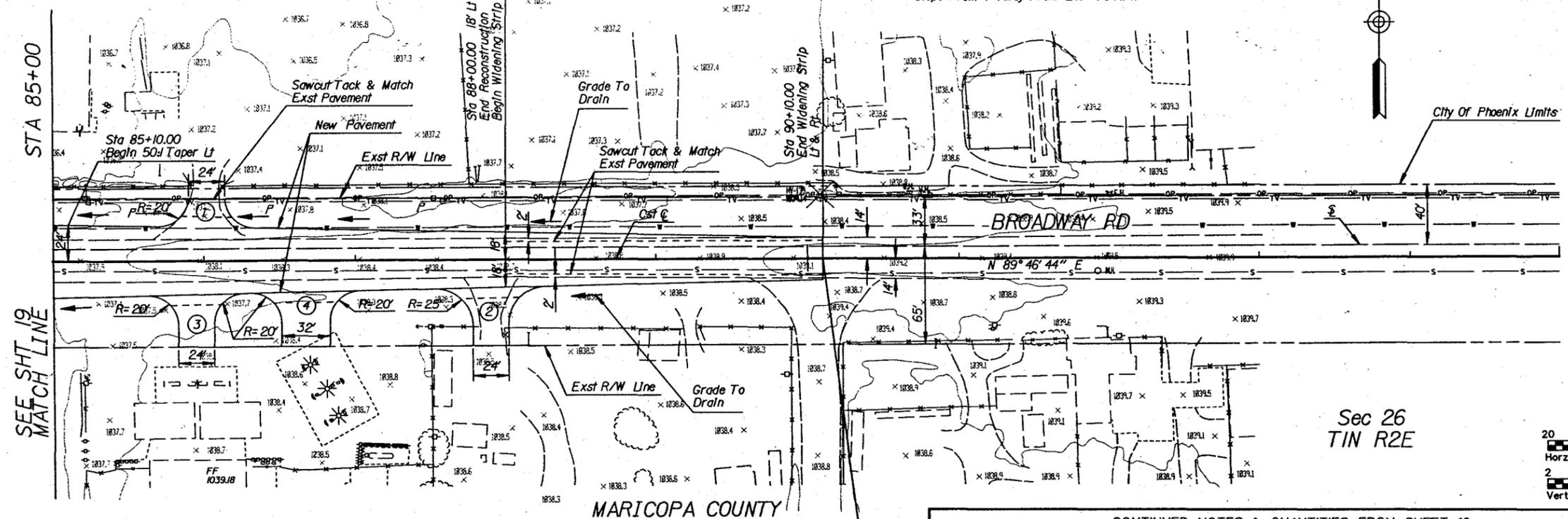
BROADWAY ROAD

43RD AVE TO 35TH AVE
MARICOPA COUNTY

Drive No.	Cst @ Station	Drive Width	Slope %	Std Detail
1	86+02 Lt	24'	+4.00%	MAG 205 Type "C"
2	87+90 Rt	24'	+1.44%	MAG 205 Type "C"
3	85+95 Rt	24'	+2.55%	MAG 205 Type "C"
4	86+68 Rt	32'	+2.8%	MAG 205 Type "C"

* Slope From 7' Away From EOP To R/W

Sec 23
TIN R2E
95



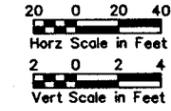
CONTINUED NOTES & QUANTITIES FROM SHEET 19

NEW CONSTRUCTION					NEW CONCRETE DRIVEWAY ENTRANCE				
NO	STATION	WIDTH	QTY (SF)	STD DETAIL	NO	STATION	WIDTH	QTY (SF)	STD DETAIL
17	BROADWAY STA 76+88.13, 19' RT TO STA 81+45, 4' LT		455 LF 2" RGRCP		22	78-64 RT	40'	1320	C.D.P.1255
18	BROADWAY STA 81+45, 4' LT		INSTALL 48" MANHOLE (MAG 522 SHAFT, C.D.P. P1520 BASE)		23	79-01 RT	16'	616	C.D.P.1255
19	35TH AVENUE STA 19+00, 4' LT TO STA 19+79, 4' LT		INSTALL 79 LF 2" RGRCP		24	79-90 RT	40'	1160	C.D.P.1255
20	35TH AVENUE STA 19+81, 4' LT		INSTALL 48" MANHOLE (MAG 522 SHAFT, C.D.P. P1520 BASE)		25	80-52 RT	36'	900	C.D.P.1255
21	35TH AVENUE STA 19+83, 4' LT TO STA 21+00, 4' LT		INSTALL 117 LF 2" RGRCP		NEW AC DRIVEWAY ENTRANCE				
22	BROADWAY STA 76+92.13, 35TH AVE STA 20+00		INSTALL 1 TYPE 'D' MONUMENT (MAG 120-2)		26	83-46 LT	24'	15'	205 TYPE "C"
23	BROADWAY STA 76+49 RT, 77+25 LT, 77+50 RT		INSTALL 3 SIDEWALK RAMPS, TYPE "A" (C.D.P. P1233)		27	82-60 RT	40'	25'	205 TYPE "C"
24	BROADWAY STA 81+0, 47' RT, - 81+0, 34' RT		INSTALL 13' LF 18" RGRCP		28	84-50 RT	40'	25'	205 TYPE "C"
25	BROADWAY STA 81+0, 47' RT		INSTALL TYPE "F" CATCH BASIN (MAG 535) V-3" W/10' MAX SLOPE AC APRON (ADOT C-15.80)		NEW AC DRIVEWAY ENTRANCE				
26	BROADWAY STA 75+00 44' LT TO STA 76+00 44' LT		CONSTRUCT 100 LF GRADER DITCH (NPI)		29	78-21 LT	32'	640	C.D.P.1255
27	BROADWAY STA 79+20 4' RT		INSTALL 48" MANHOLE (MAG 522 SHAFT, C.D.P. P1520 BASE)		30	79-67 LT	30'	420	C.D.P.1255
28	BROADWAY STA 79+20 4' RT		INSTALL 48" MANHOLE (MAG 522 SHAFT, C.D.P. P1520 BASE)		31	80-99 LT	32'	576	C.D.P.1255

THESE DRIVES HAVE AN INITIAL 5' CONCRETE APPROACH FROM THE ROADWAY
= QUANTITIES ARE INCLUDED IN THE PAVEMENT QUANTITIES

PAVEMENT QUANTITIES		
1	SUBGRADE PREPARATION	8801 SY.
2	AGGREGATE BASE	4456 TON
3	AC PAVEMENT (D-1/2)	723 TON
4	AC PAVEMENT (C-3/4)	1205 TON

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	20	44	



NEW AC DRIVEWAY ENTRANCE				
NO	STATION	WIDTH	RADIUS	MAG STD DETAIL
1	86-02 LT	24'	20'	205 TYPE "C"
2	87-90 RT	24'	25'	205 TYPE "C"
3	85-95 RT	24'	20'	205 TYPE "C"
4	86-68 RT	32'	20'	205 TYPE "C"

QUANTITIES ARE INCLUDED IN THE PAVEMENT QUANTITIES.

PAVEMENT QUANTITIES		
1	SUBGRADE PREPARATION	2011 SY.
2	AGGREGATE BASE	1018 TON
3	AC PAVEMENT (D-1/2)	167 TON
4	AC PAVEMENT (C-3/4)	276 TON

REVISION BY DATE

MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION

BROADWAY ROAD
43RD AVENUE TO 35TH AVENUE
PROJECT NO. 68237

DESIGNED	BY	DATE
M. J. SCHNEIDER	M. J. SCHNEIDER	8-94
M. J. SCHNEIDER	M. J. SCHNEIDER	8-94
J. H. KRAMER	J. H. KRAMER	8-94

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PLAN & PROFILE SHEET
STA 85+00 TO STA 95+00

SHEET OF 20 44

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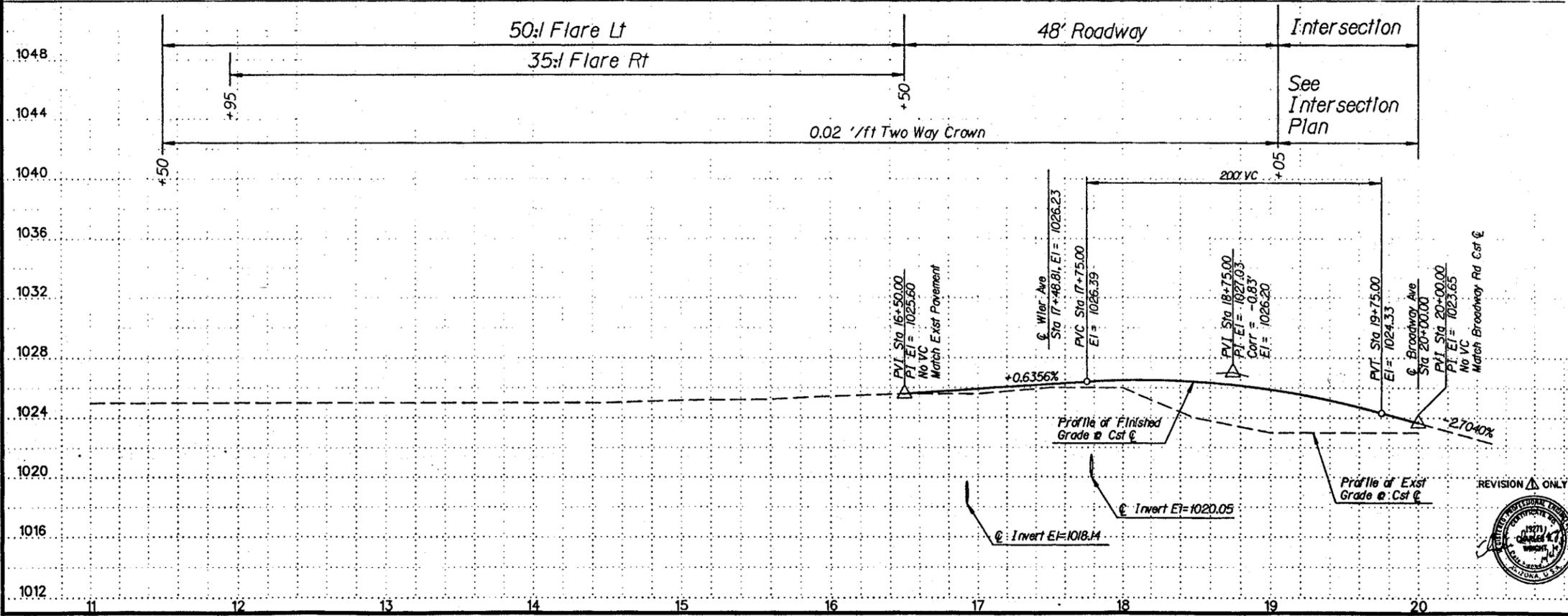
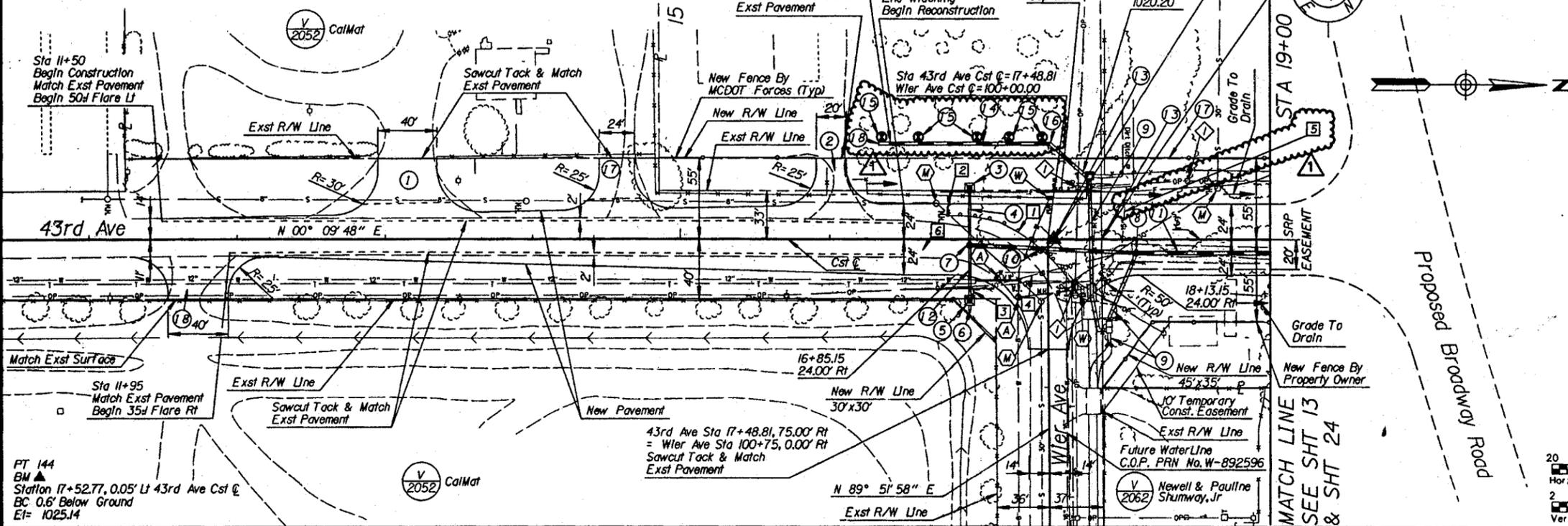
BROADWAY ROAD

43RD AVE TO 35TH AVE

MARICOPA COUNTY

Drive No.	Cst @ Station	Drive Width	Slope =	Slope **
1	13+15 Lt	40'	-5.0%	-1.17%
2	16+01 Lt	20'	-5.0%	-0.96%
7	14+58 Lt	24'	-5.0%	+0.54%
8	11+75 Rt	40'	-5.0%	+0.68%

* Slope From EOP to 7' Outside EOP
 ** Slope From 7' Outside EOP To Match Existing Surface



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	21	44	

NO	STATION	DESCRIPTION	QTY	UNIT
1	16-80 16'LT	17-72 40'RT	113	LF
2	16-80 16'LT	16-80 29'LT	1	EACH
3	16-95 35'RT	-	1	EACH
4	16-95 35'RT	18-90 10'RT	100	LF
5	18-00 4'RT	18-04 36'RT	40	LF

NO	STATION	WIDTH	RADIUS	MAG	STD	DETAIL
1	13-15 LT	40'	30'	205	TYPE 'C'	
2	16-01 LT	20'	25'	205	TYPE 'C'	
7	14-58 LT	24'	25'	205	TYPE 'C'	
8	11-75 RT	40'	25'	205	TYPE 'C'	

NO	DESCRIPTION	QTY	UNIT
1	SUBGRADE PREPARATION	3087	SY.
2	AGGREGATE BASE	1563	TON
3	AC PAVEMENT (D-1/2)	254	TON
4	AC PAVEMENT (C-3/4)	423	TON

NO.	REVISION	BY	DATE
1	Addendum No. 1	CRW	10/5/94

MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION

BROADWAY ROAD
43RD AVENUE TO 35TH AVENUE
PROJECT NO. 68237

DESIGNED	BY	DATE
M. J. SCHNEIDER	M. J. SCHNEIDER	8-94
M. J. SCHNEIDER	M. J. SCHNEIDER	8-94
J. H. KRAMER	J. H. KRAMER	8-94

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43RD AVE PLAN & PROFILE SHEET
 STA 11+00 TO STA 20+00

SHEET OF 21

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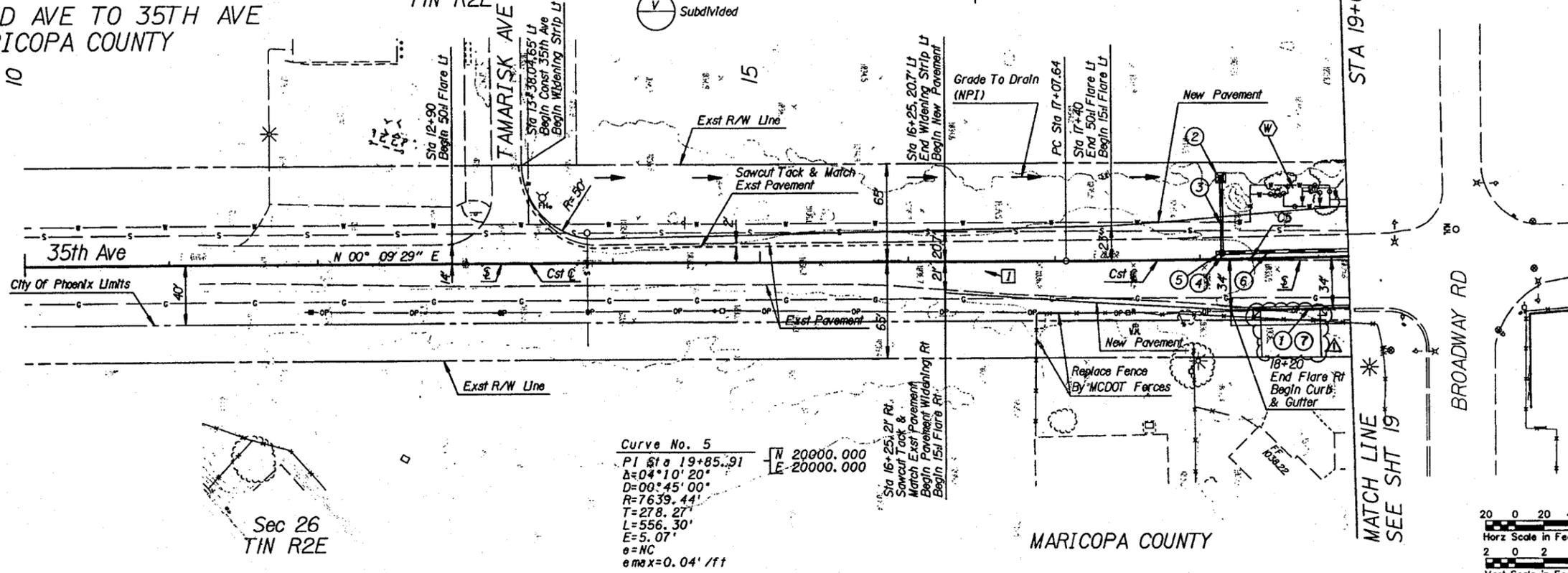


BROADWAY ROAD
43RD AVE TO 35TH AVE
MARICOPA COUNTY

Sec 27
TIN R2E

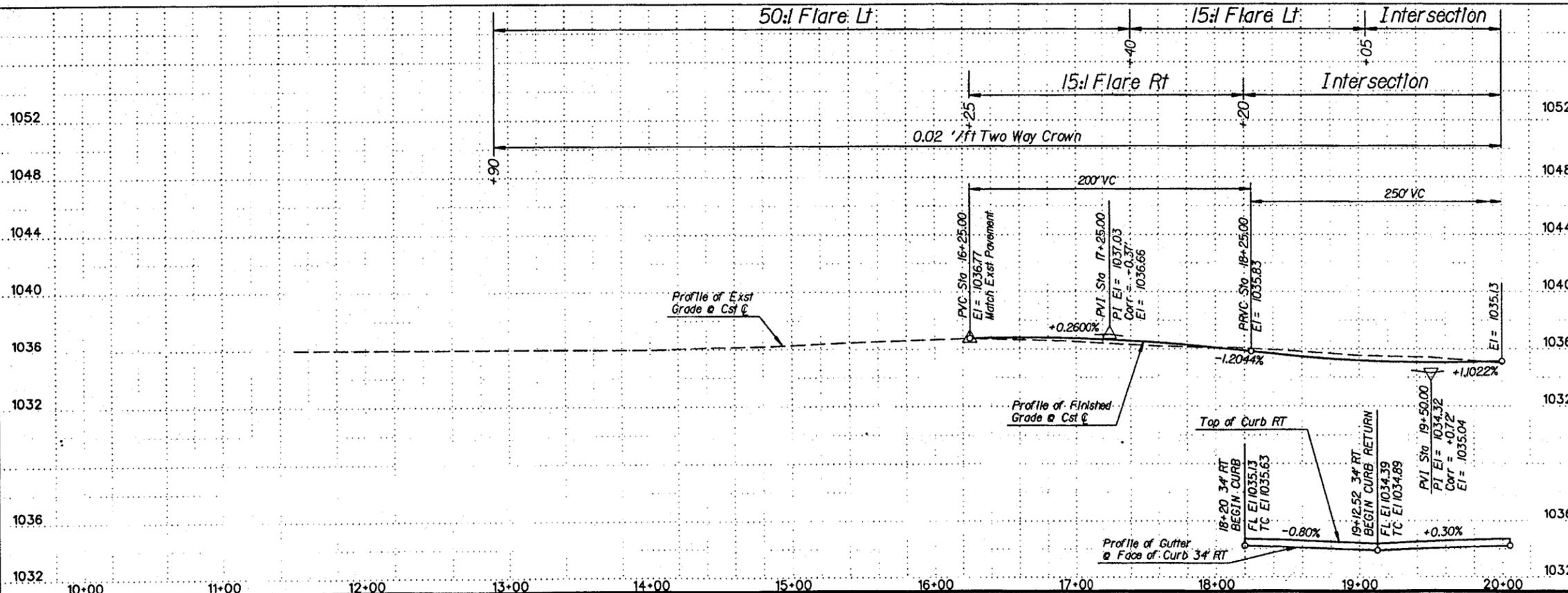
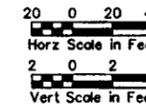
CITY OF PHOENIX

STA 19+00



Sec 26
TIN R2E

MARICOPA COUNTY

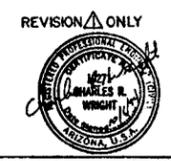


F.H.W.A REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	22	44	

ADJUSTMENT				
W	WATER VALVE, BOX & COVER, (MAG 39H-A)	7	EACH	
	(FOR DETOUR PAVEMENT)			

NEW CONSTRUCTION - CURB GUTTER				
STATION TO STATION	TYPE	QTY	UNIT	
① 18+20 34' RT	19+00 34' RT	220-A	80	LF

- ② 35TH AVENUE STA 18+15, 48' LT - INSTALL TYPE "N" CATCH BASIN (C.D.P. P-1570) V-3.5' W/10' MAX SLOPE AC APRON (ADOT C-15.80)
- ③ 35TH AVENUE STA 18+15, 48' LT TO STA 18+15, 6' LT - INSTALL 42' LF 18" RGRCP
- ④ 35TH AVENUE STA 18+15, 4' LT - INSTALL 48" MANHOLE (C.D.P. 1520 BASE, MAG 522 SHAFT)
- ⑤ 35TH AVENUE STA 18+13, 4' LT - INSTALL 24" STUB OUT AND PLUG (MAG 421)
- ⑥ 35TH AVENUE STA 18+17, 4' LT TO STA 19+00, 4' LT - INSTALL 83' LF 24" RGRCP
- ⑦ STA 18+60. CONSTRUCT CONCRETE DRIVEWAY, WIDTH 40', LENGTH 5', (C.O.P. STD. DETAIL 1255) & INSTALL 40' WIDE A.C. DRIVEWAY FROM CONCRETE DRIVEWAY TO RIGHT-OF-WAY LINE.



PAVEMENT QUANTITIES			
1	SUBGRADE PREPARATION	1257	SY.
2	AGGREGATE BASE	637	TON
3	A.C. PAVEMENT (D-1/2)	104	TON
4	A.C. PAVEMENT (C-3/4)	173	TON

ADDENDUM NO.	REVISION	CRW	10/5/94	DATE

MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION
BROADWAY ROAD
43RD AVENUE TO 35TH AVENUE
PROJECT NO. 68237

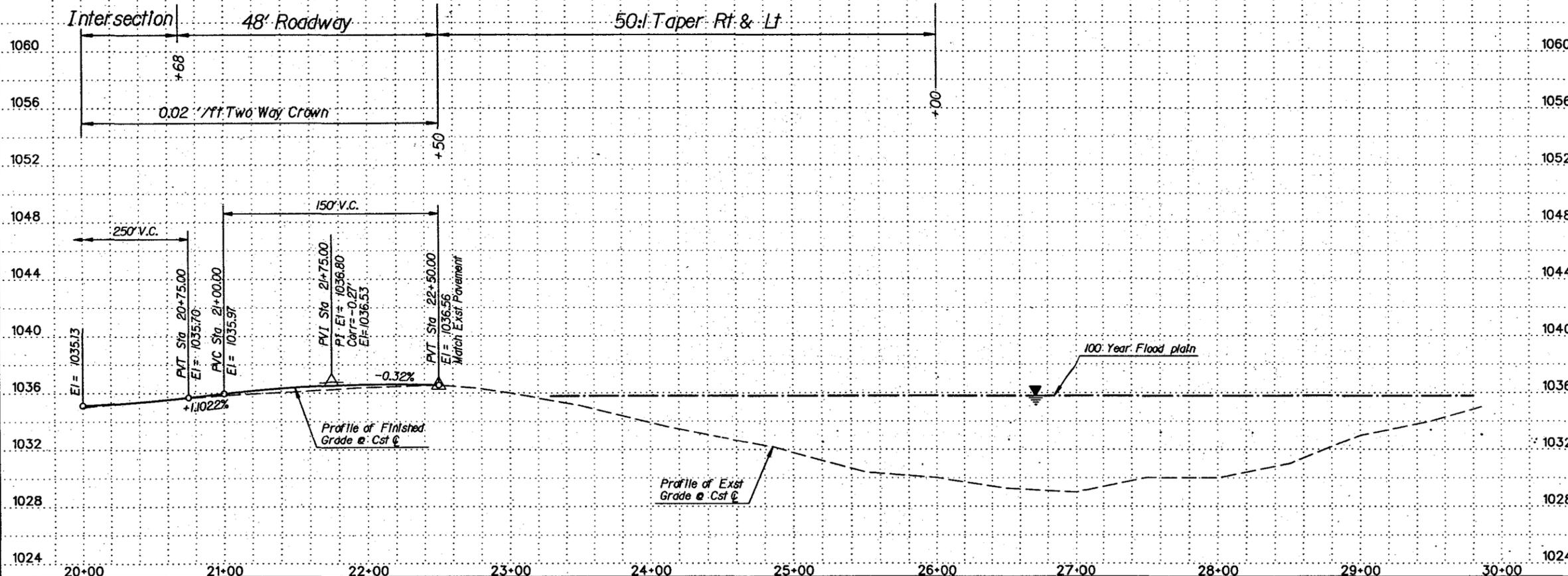
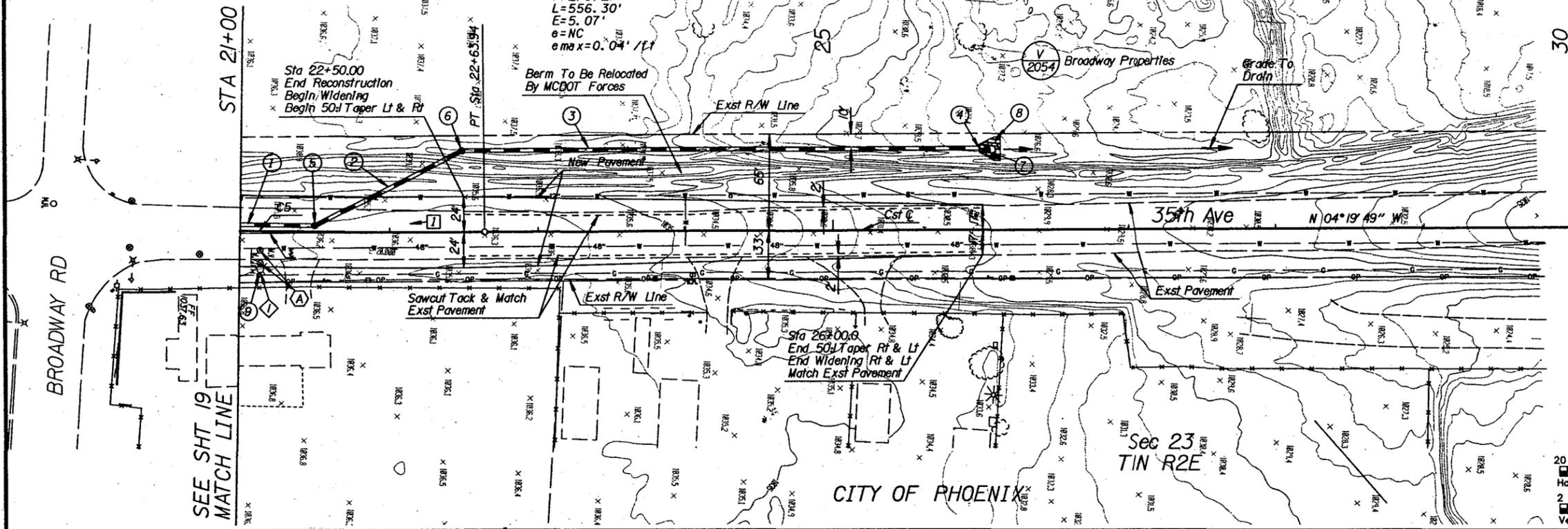
DESIGNED	BY	DATE
M. J. SCHNEIDER		8-94
DRAWN	BY	DATE
M. J. SCHNEIDER		8-94
CHECKED	BY	DATE
J. H. KRAMER		8-94

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PLAN & PROFILE SHEET
35TH AVE, STA 10+00 TO STA 20+00
SHEET OF 22 44
TRACS NO.

BROADWAY ROAD

43RD AVE TO 35TH AVE
MARICOPA COUNTY

Curve No. 5
 PI Sta 19+85.91
 $\Delta = 04^{\circ}10'20''$
 $D = 00^{\circ}45'00''$
 $R = 7639.44'$
 $T = 278.27'$
 $L = 556.30'$
 $E = 5.07'$
 $e = NC$
 $e_m a x = 0.04' / 1'$



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	23	44	

RELOCATIONS

1	FIRE HYDRANT TO STA 21+4 32' RT	1	EACH
---	---------------------------------	---	------

ADJUSTMENT TO GRADE

A	WATER VALVE, BOX & COVER, MAG 39H-KA	2	EACH
---	--------------------------------------	---	------

REMOVALS

NO	STATION TO STATION	DESCRIPTION	QTY	UNIT
----	--------------------	-------------	-----	------

1	21+00	26+00	AC PAVEMENT UNKNOWN THICKNESS	715	SY
---	-------	-------	-------------------------------	-----	----

NEW CONSTRUCTION

- 1 STA 21+00 4' LT TO STA 21+50 4' LT - INSTALL 50 LF 24" RGRCP
- 2 STA 21+50 4' LT TO STA 22+50 55' LT - INSTALL 110 LF 24" RGRCP
- 3 STA 22+50 55' LT TO STA 25+98 55' LT - INSTALL 348 LF 24" RGRCP
- 4 STA 25+98 55' LT - CONSTRUCT REINFORCED CONCRETE "U" TYPE HEADWALL (MAG 50H-2) L_x 2' 6"
- 5 STA 21+50 4' LT - INSTALL 48" MANHOLE (MAG 522 SHAFT, C.O.P. 1520 BASE)
- 6 STA 22+50 55' LT - INSTALL 48" MANHOLE (MAG 522 SHAFT, C.O.P. 1520 BASE)
- 7 STA 25+98 55' LT - INSTALL NEENAH TYPE SF 24" AUTOMATIC DRAINAGE GATE WITH CAST IRON COVER OR EQUAL
- 8 INSTALL 8 SY PLAIN RIP RAP (SEE DETAIL SHT 7)
- 9 35TH AVE STA 21+4 25' RT TO STA 21+4 32' RT - INSTALL 7 LF 6" DIA CAST IRON PIPE (MAG 360)

PAVEMENT QUANTITIES

1	SUBGRADE PREPARATION	1267	SY.
2	AGGREGATE BASE	642	TON
3	AC PAVEMENT (D-1/2)	105	TON
4	AC PAVEMENT (C-3/4)	174	TON

NO.	REVISION	BY	DATE

MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION

BROADWAY ROAD
43RD AVENUE TO 35TH AVENUE
PROJECT NO. 68237

BY	DATE
DESIGNED M. J. SCHNEIDER	8-94
DRAWN M. J. SCHNEIDER	8-94
CHECKED J. H. KRAMER	8-94

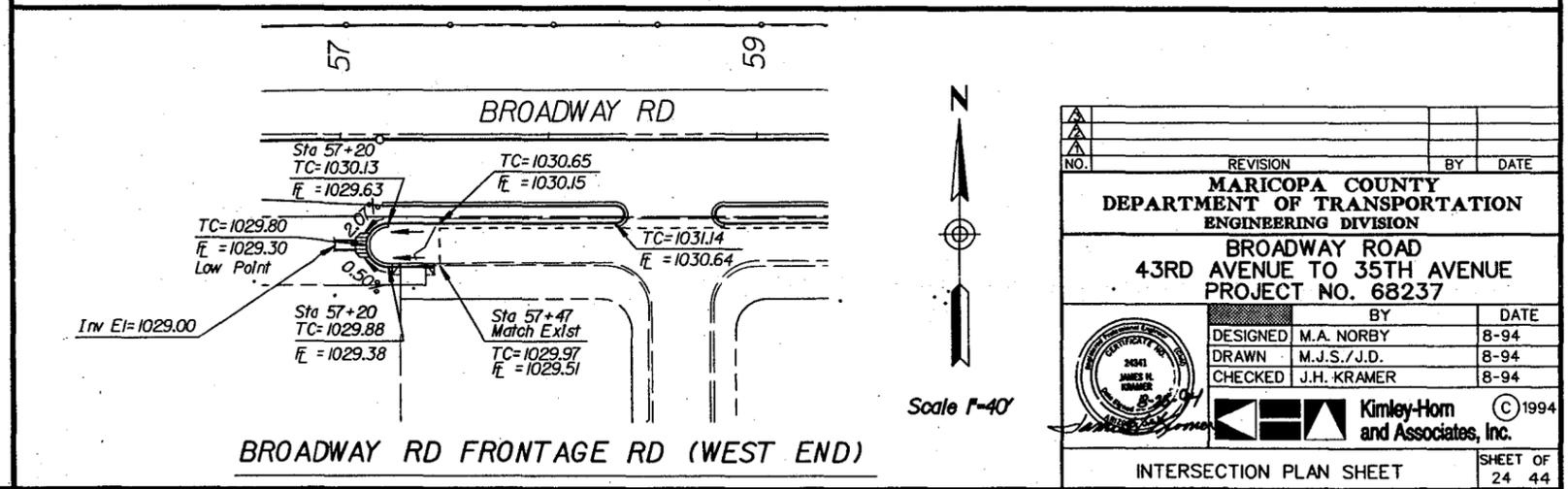
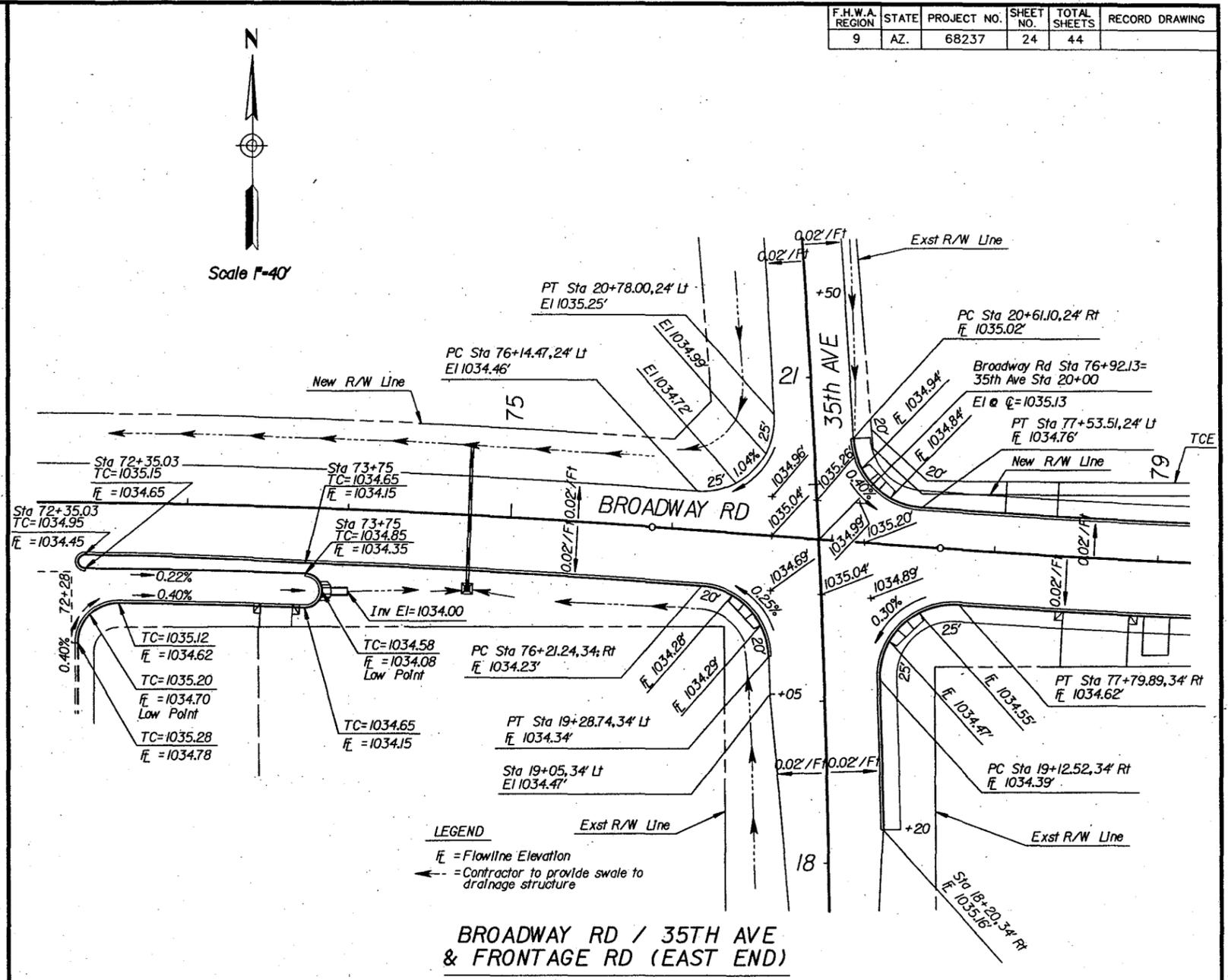
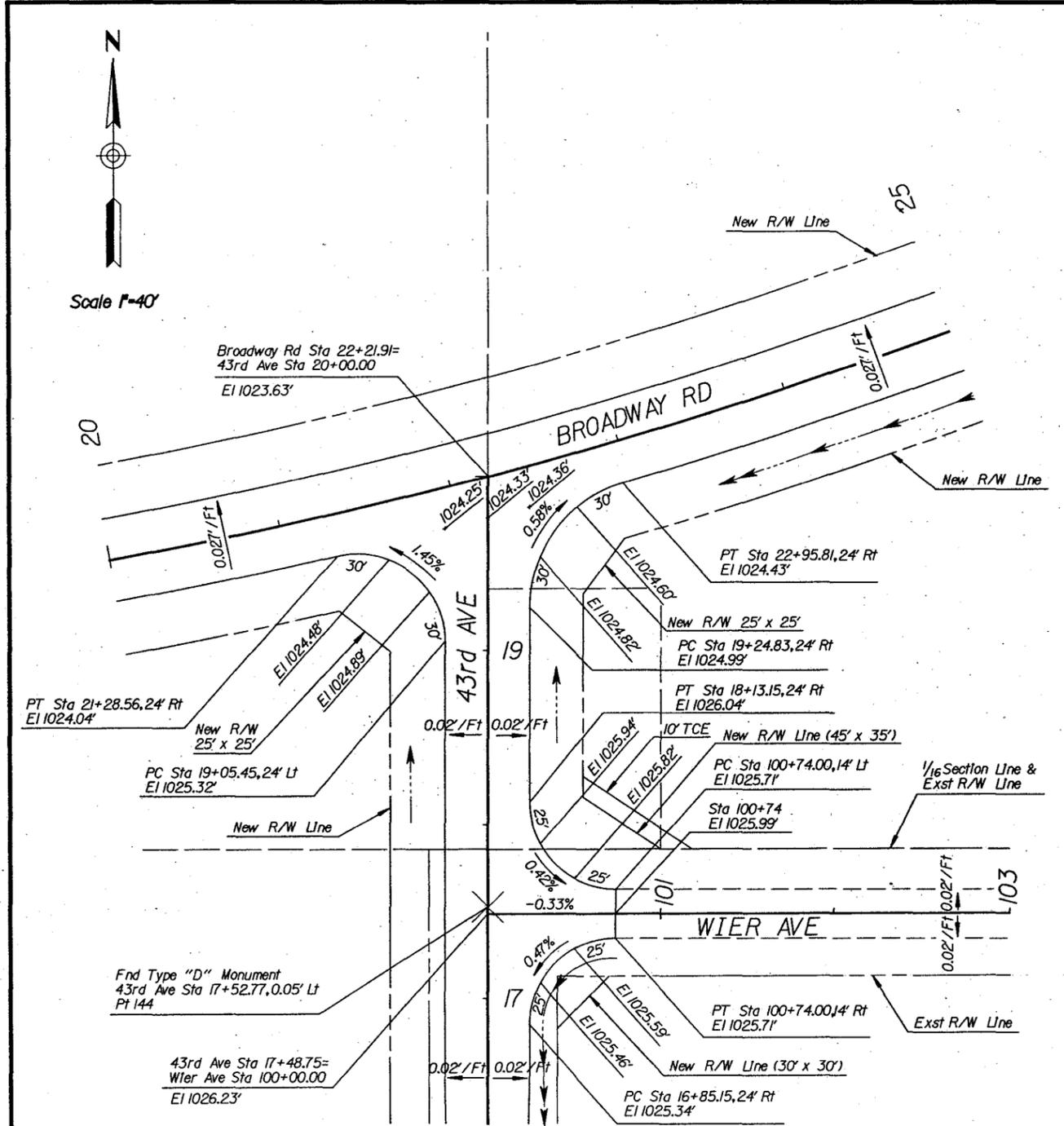
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PLAN & PROFILE SHEET
35TH AVE, STA 20+00 TO STA 30+00
SHEET OF 23 44

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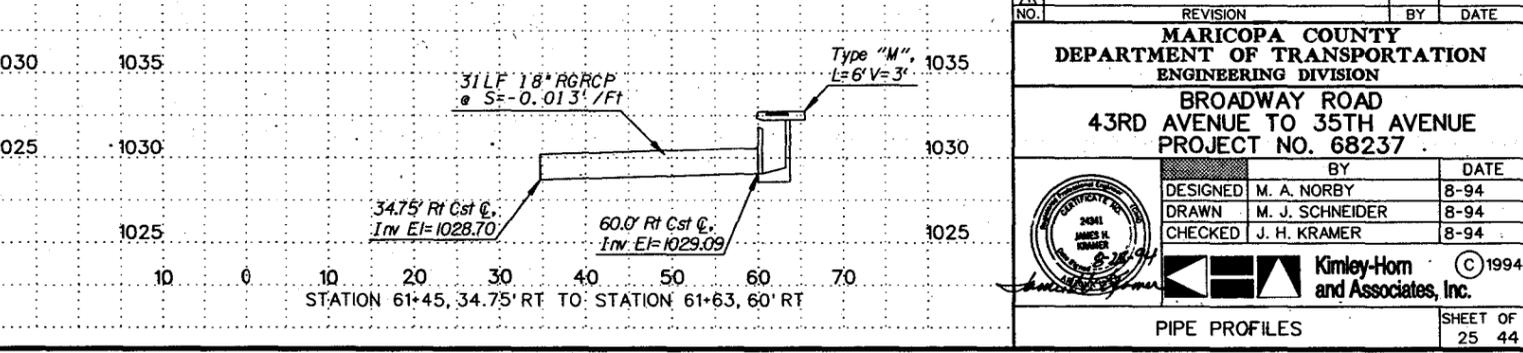
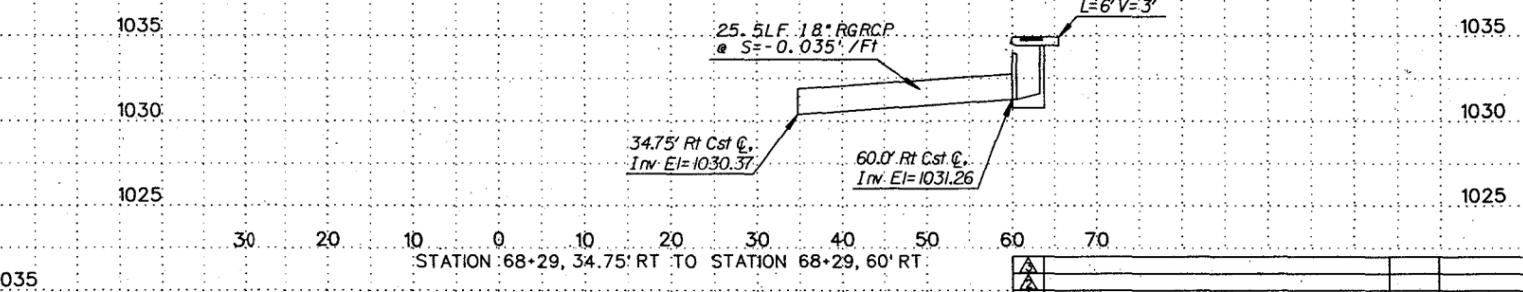
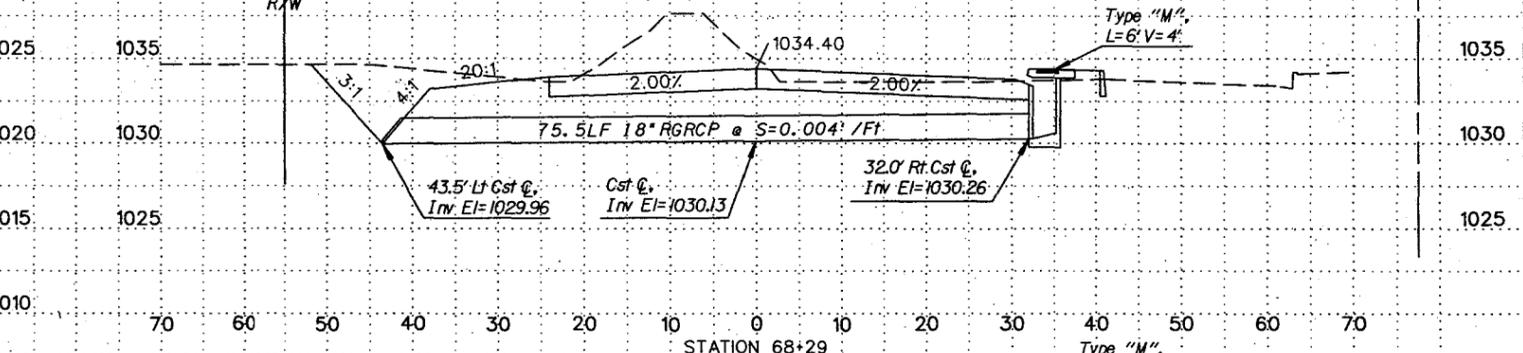
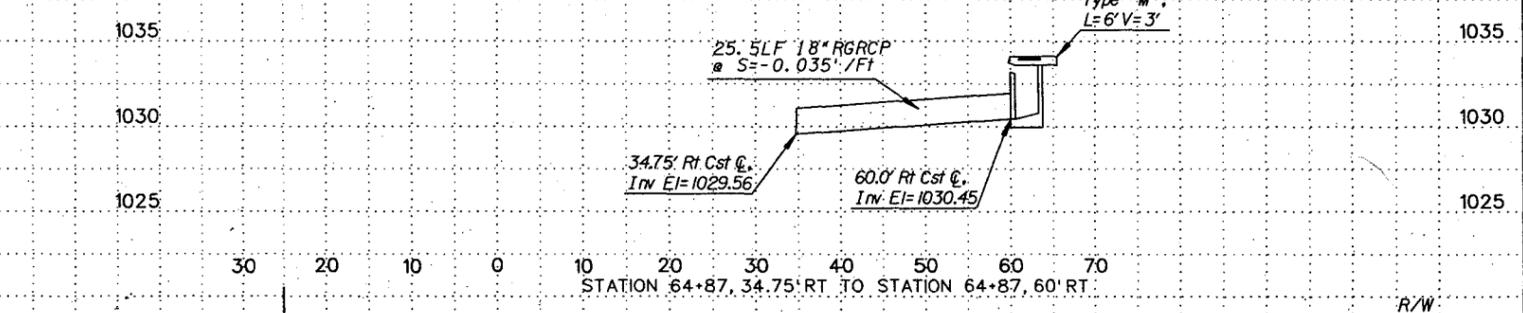
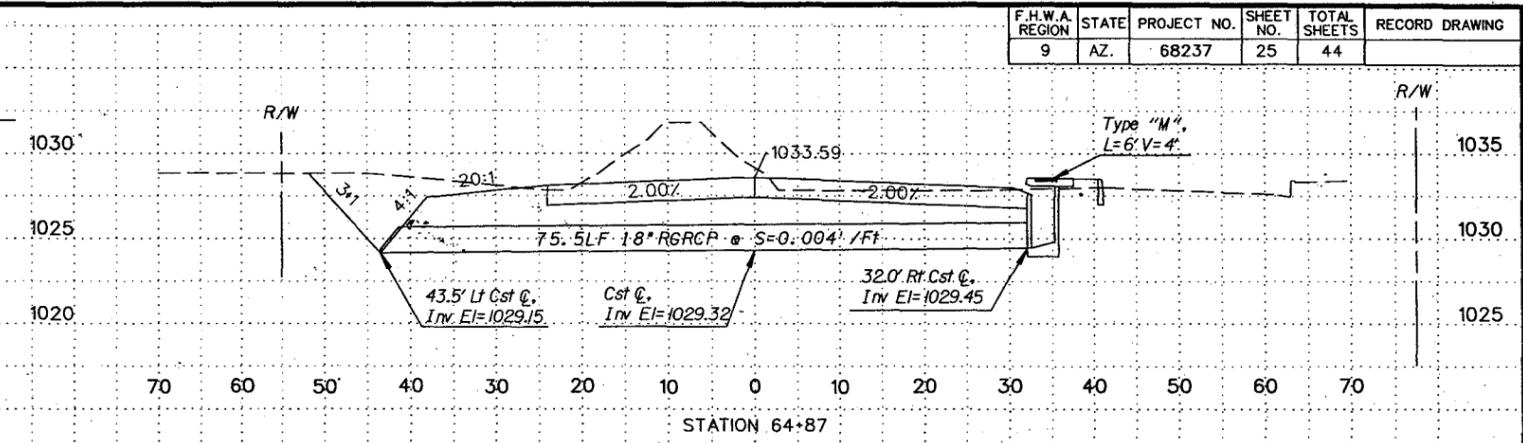
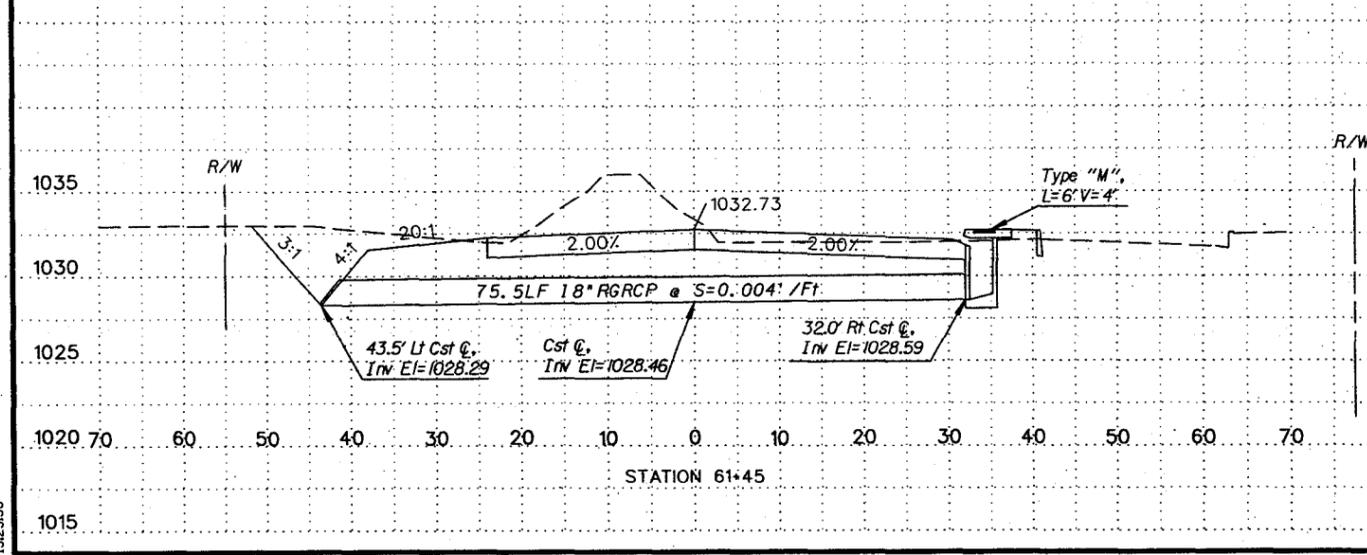
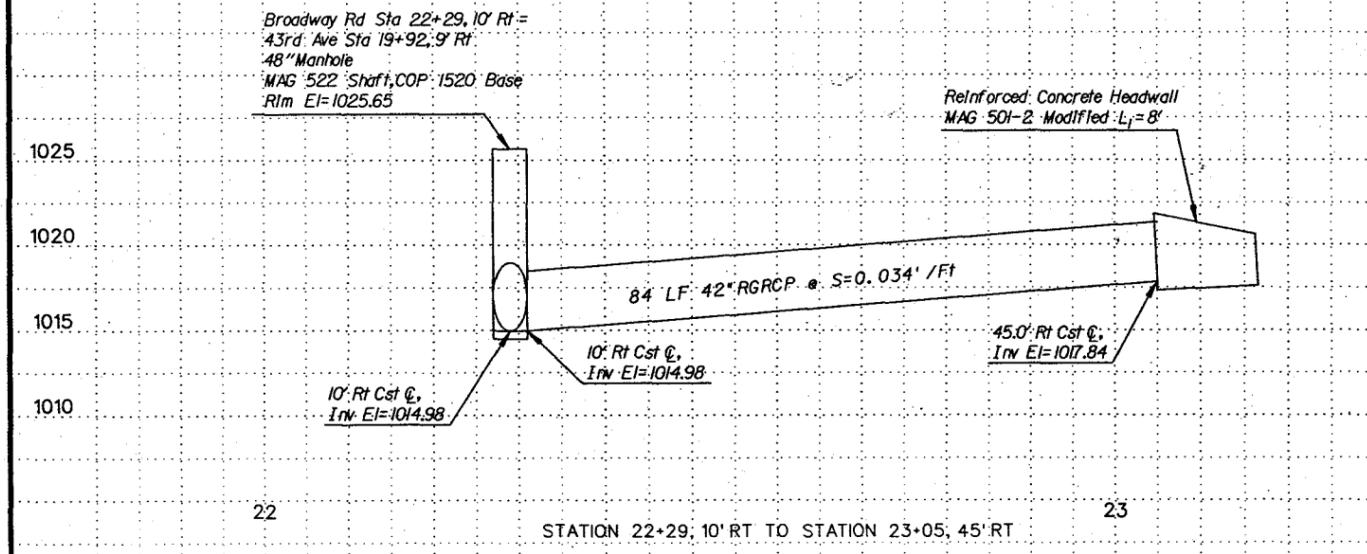
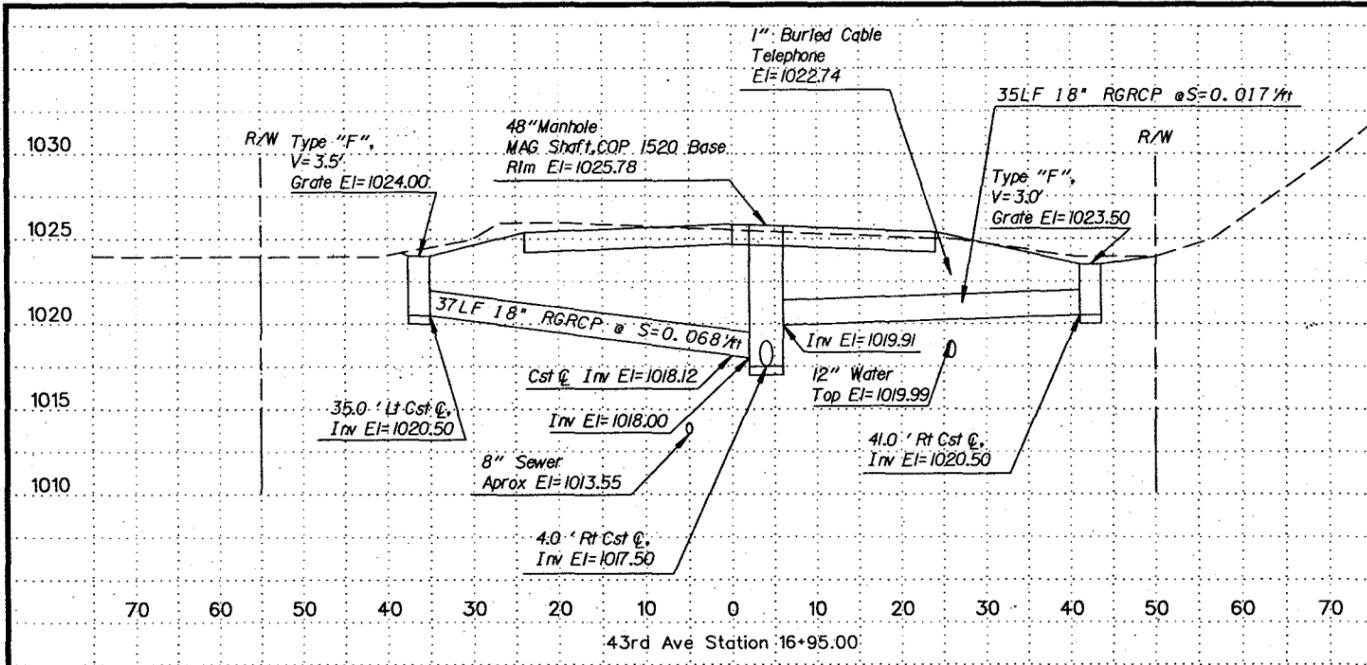
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	24	44	



NO.	REVISION	BY	DATE
MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION ENGINEERING DIVISION BROADWAY ROAD 43RD AVENUE TO 35TH AVENUE PROJECT NO. 68237			
DESIGNED	M.A. NORBY	8-94	
DRAWN	M.J.S./J.D.	8-94	
CHECKED	J.H. KRAMER	8-94	
INTERSECTION PLAN SHEET			SHEET OF 24 44

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 Aug. 24, 1994
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NO.	REVISION	BY	DATE

MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION

BROADWAY ROAD
43RD AVENUE TO 35TH AVENUE
PROJECT NO. 68237

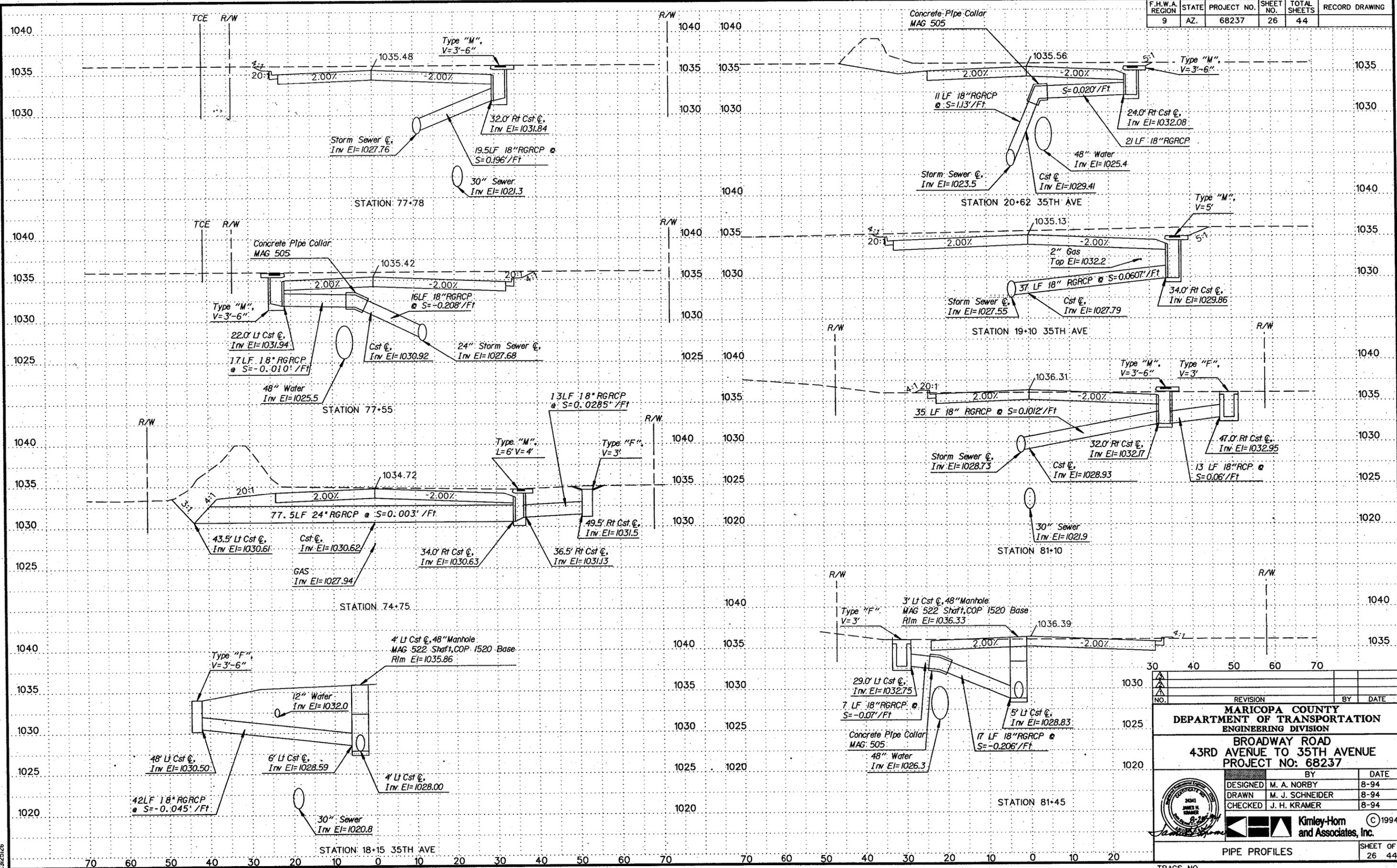
DESIGNED	M. A. NORBY	8-94
DRAWN	M. J. SCHNEIDER	8-94
CHECKED	J. H. KRAMER	8-94

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PIPE PROFILES SHEET OF 25 44

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 Aug 24, 1994
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F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	26	44	



NO.	REVISION	BY	DATE

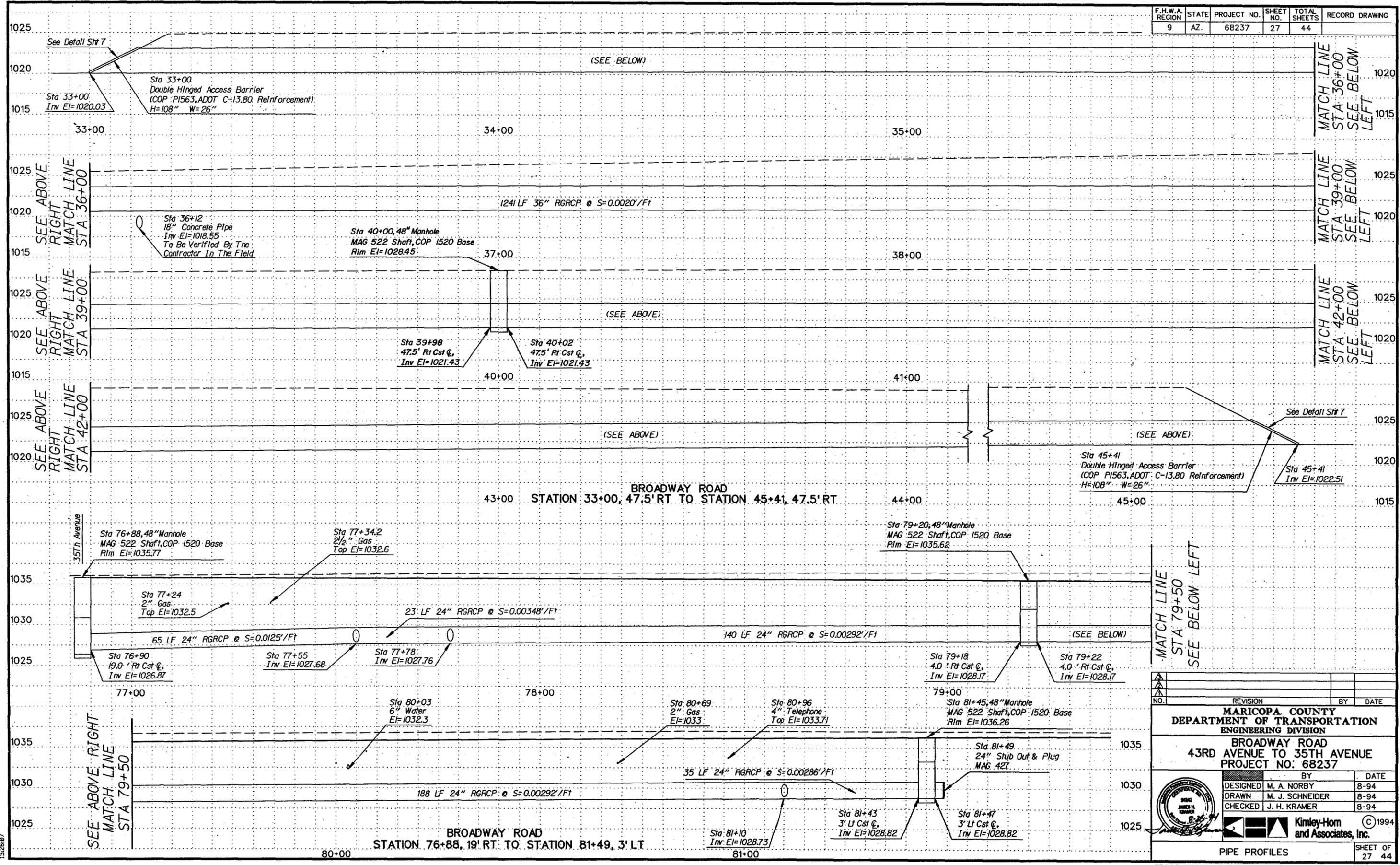
MARICOPA COUNTY
 DEPARTMENT OF TRANSPORTATION
 ENGINEERING DIVISION
BROADWAY ROAD
43RD AVENUE TO 35TH AVENUE
 PROJECT NO: 68237

DESIGNED	M. A. NORBY	8-94
DRAWN	M. J. SCHNEIDER	8-94
CHECKED	J. H. KRAMER	8-94

BY DATE
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 PIPE PROFILES SHEET OF 26 44

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F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ	68237	27	44	



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Aug 24, 1994
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NO.	REVISION	BY	DATE

MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION

BROADWAY ROAD
43RD AVENUE TO 35TH AVENUE
PROJECT NO: 68237

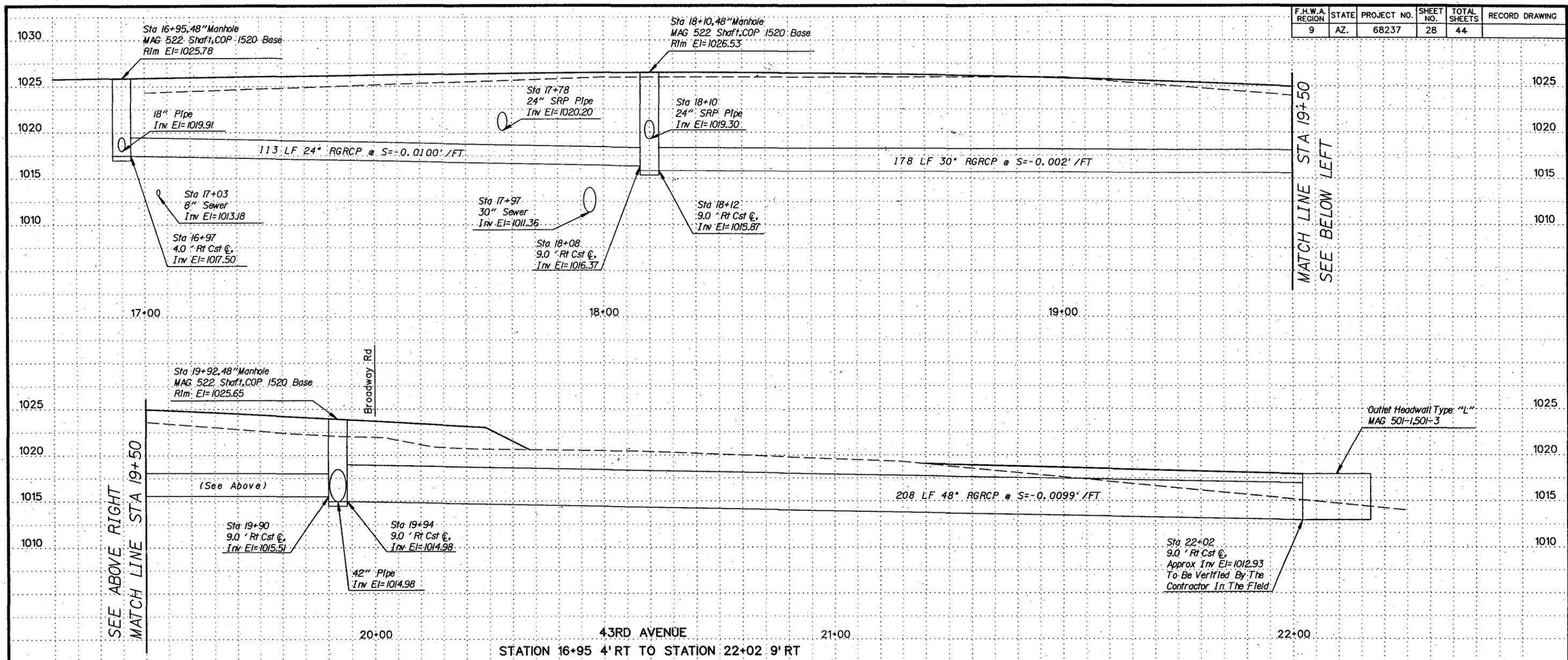
DESIGNED	M. A. NORBY	8-94
DRAWN	M. J. SCHNEIDER	8-94
CHECKED	J. H. KRAMER	8-94

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PIPE PROFILES SHEET OF 27 44

TRACS NO.

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	28	44	



SEE ABOVE RIGHT
MATCH LINE STA 19+50

MATCH LINE STA 19+50
SEE BELOW LEFT

43RD AVENUE
STATION 16+95 4' RT TO STATION 22+02 9' RT

NO.	REVISION	BY	DATE
MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION ENGINEERING DIVISION			
BROADWAY ROAD 43RD AVENUE TO 35TH AVENUE PROJECT NO. 68237			
	DESIGNED	M. A. NORBY	8-94
	DRAWN	M. J. SCHNEIDER	8-94
	CHECKED	J. H. KRAMER	8-94
		BY	DATE



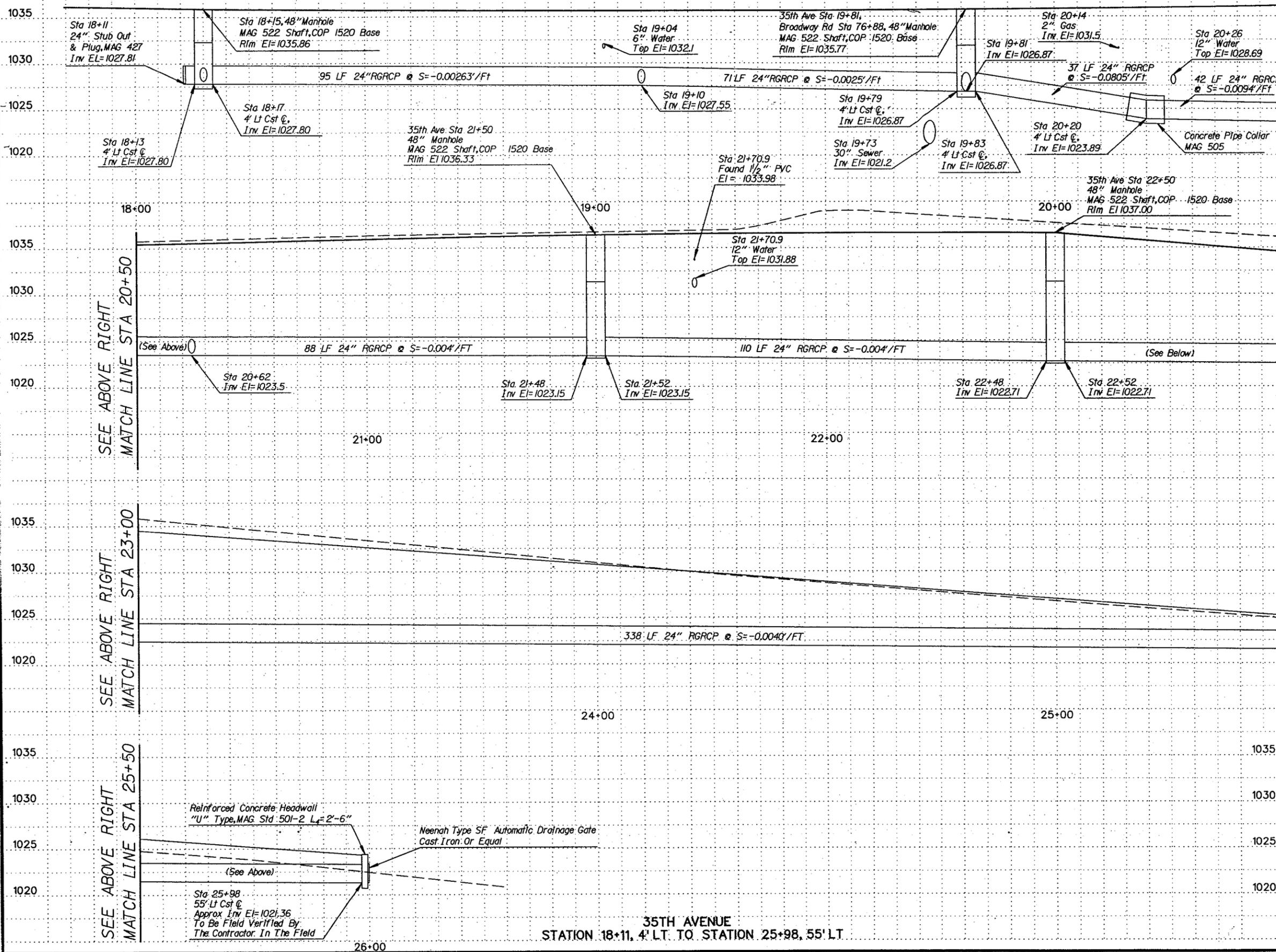
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PIPE PROFILES SHEET OF 28 44

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TRACS NO.

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ	68237	29	44	



MATCH LINE STA 20+50
 MATCH LINE STA 23+00
 MATCH LINE STA 25+50
 SEE ABOVE RIGHT
 SEE BELOW LEFT
 SEE ABOVE RIGHT
 SEE BELOW LEFT
 SEE ABOVE RIGHT
 SEE BELOW LEFT
 SEE ABOVE RIGHT
 SEE BELOW LEFT

NO.	REVISION	BY	DATE

MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION
BROADWAY ROAD
43RD AVENUE TO 35TH AVENUE
PROJECT NO. 68237

DESIGNED	M. A. NORBY	8-94
DRAWN	M. J. SCHNEIDER	8-94
CHECKED	J. H. KRAMER	8-94

BY _____ DATE _____
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 PIPE PROFILES SHEET OF 29 44

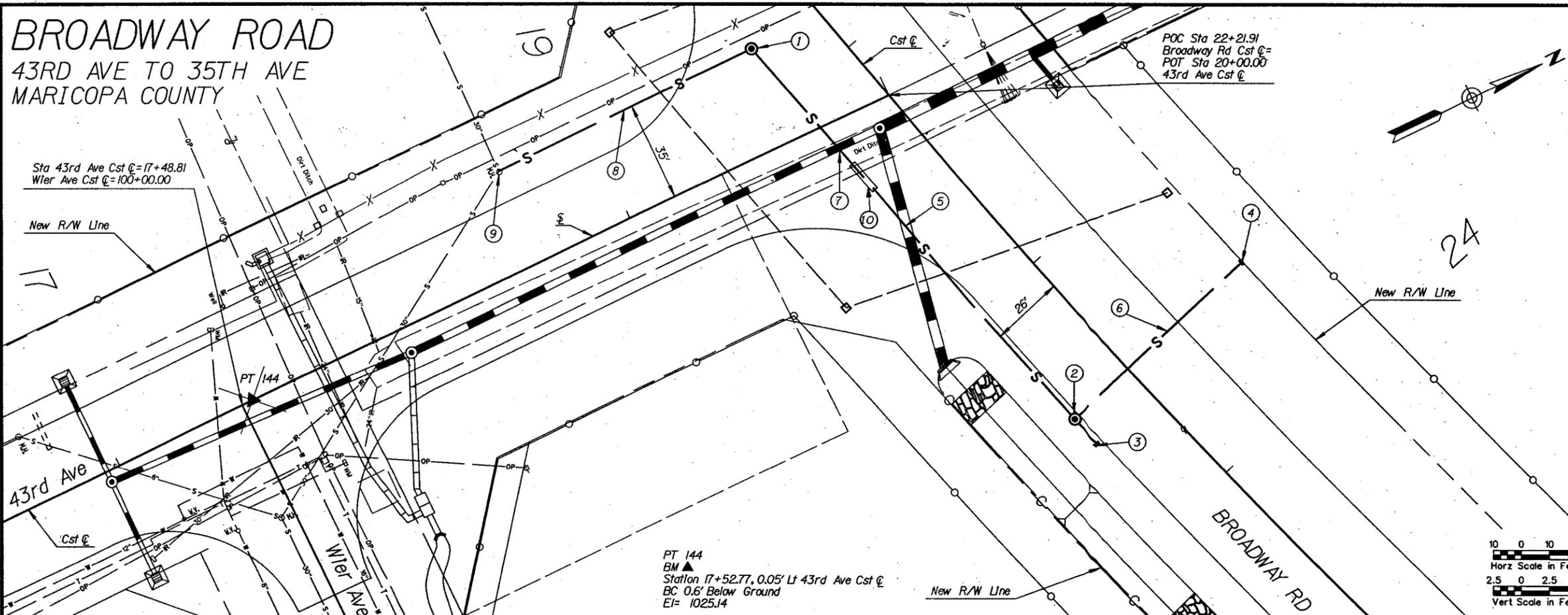
35TH AVENUE
STATION 18+11, 4' LT. TO STATION 25+98, 55' LT.

TRACS NO.

BROADWAY ROAD

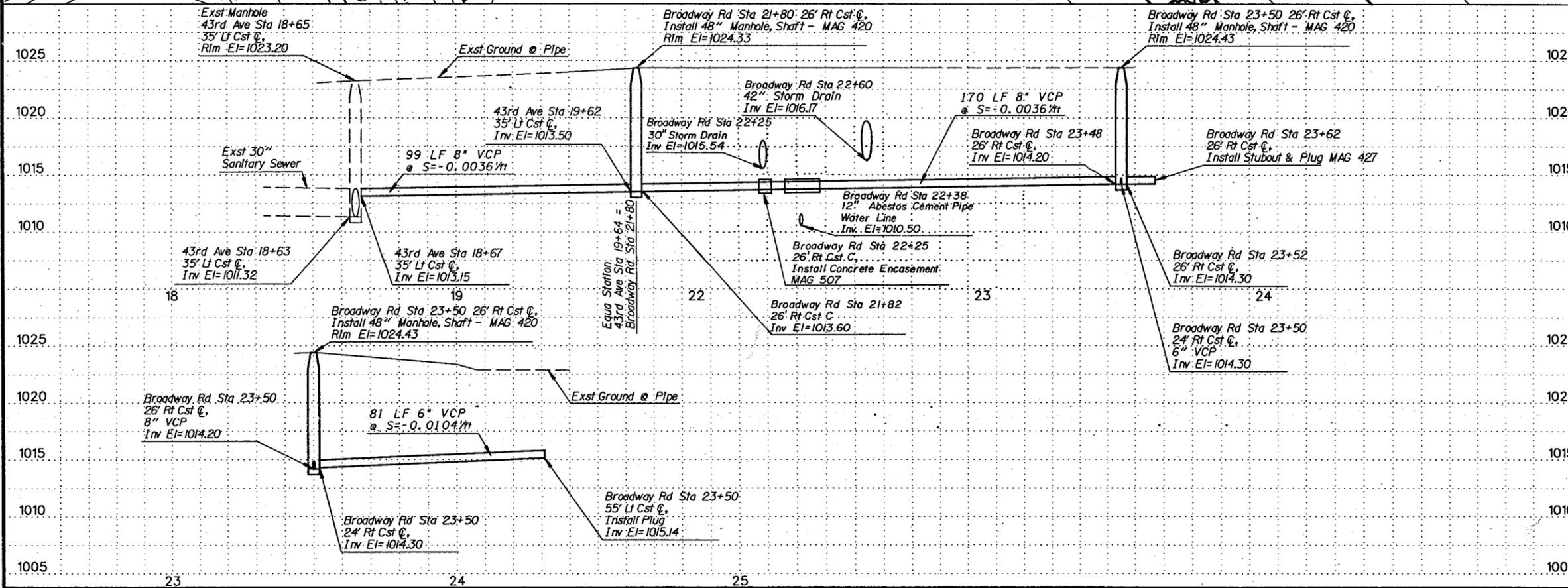
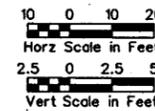
43RD AVE TO 35TH AVE

MARICOPA COUNTY



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	31	44	

- NEW CONSTRUCTION ○
- ① 43RD AVE STA 19+64 35' LT - INSTALL 48" MANHOLE MAG 420
 - ② BROADWAY RD STA 23+50 26' RT - INSTALL 48" MANHOLE MAG 420
 - ③ BROADWAY RD STA 23+62 26' RT - INSTALL STUBOUT & PLUG MAG 427
 - ④ BROADWAY RD STA 23+50 55' LT - INSTALL PLUG MAG 427
 - ⑤ BROADWAY RD STA 21+82 26' RT TO STA 23+48 26' RT - INSTALL 170 LF 8" VCP
 - ⑥ BROADWAY RD STA 23+50 24' RT TO STA 23+50 55' LT - INSTALL 81 LF 6" VCP
 - ⑦ BROADWAY RD STA 22+25 26' RT - INSTALL CONCRETE ENCASEMENT MAG 507
 - ⑧ 43RD AVE STA 18+67 35' LT TO STA 19+62 35' LT - INSTALL 99 LF 8" VCP
 - ⑨ CONNECT NEW 8" VCP TO EXISTING SEWER MANHOLE RESHAPE INVERT TO PROVIDE SMOOTH FLOW THROUGH MANHOLE
 - ⑩ BROADWAY RD STA 22+38 26' RT - INSTALL 12 LF CONC ENCASEMENT MAG 404



APPROVAL: *[Signature]* 8-22-94
 for WATER SERVICES DIRECTOR DATE

NO.	REVISION	BY	DATE

MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION
BROADWAY ROAD
43RD AVENUE TO 35TH AVENUE
PROJECT NO. 68237

DESIGNED	BY	DATE
M. J. SCHNEIDER	M. J. SCHNEIDER	8-94
M. J. SCHNEIDER	M. J. SCHNEIDER	8-94
J. H. KRAMER	J. H. KRAMER	8-94

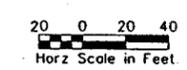
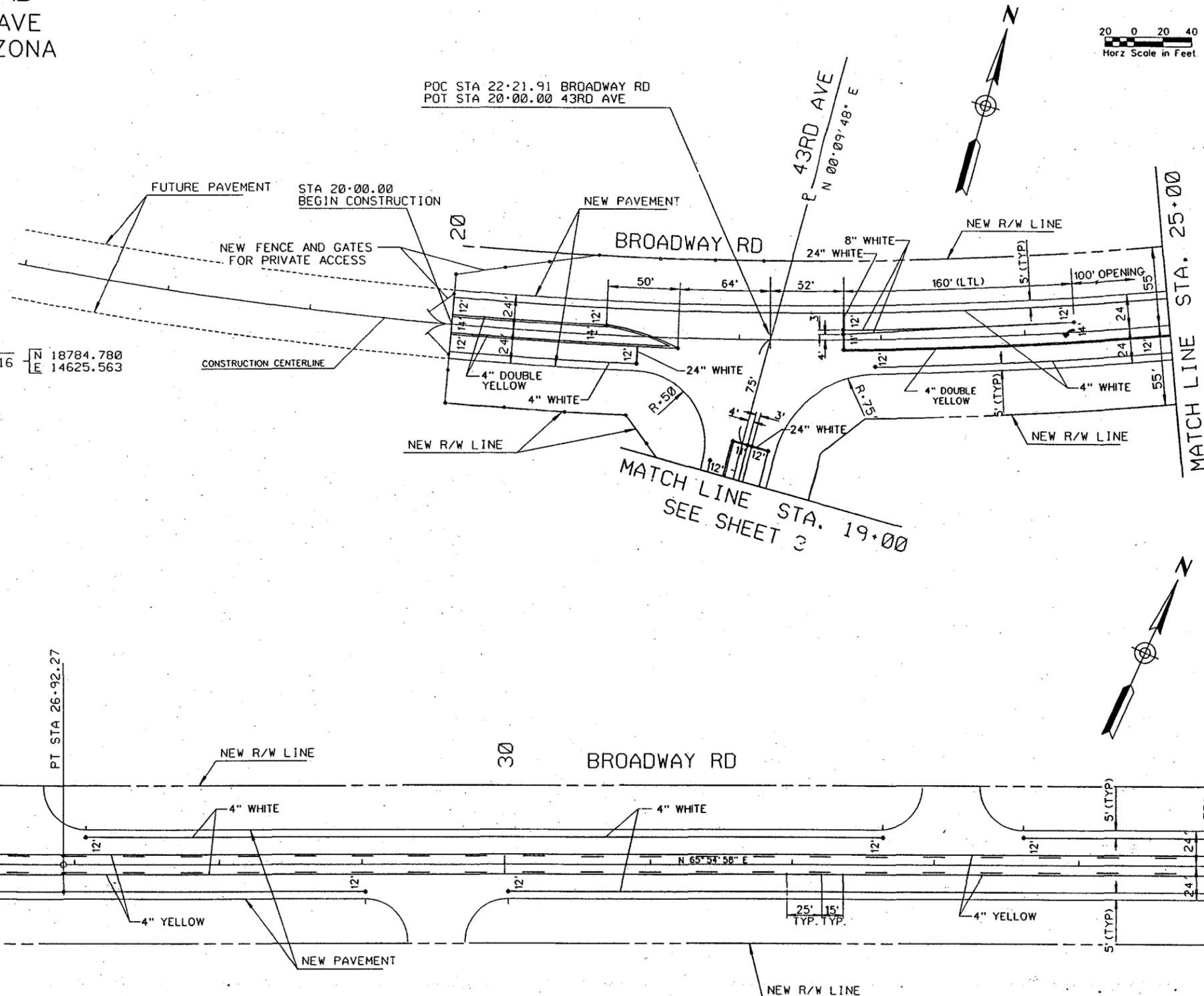
Kimley-Horn and Associates, Inc. © 1994
 SANITARY SEWER SHEET
 43RD AVE AND BROADWAY RD
 SHEET OF 31 44

MC21012.dgn
 Aug 22, 1994
 12:42:23

BROADWAY ROAD 43RD AVE TO 35TH AVE MARICOPA COUNTY, ARIZONA

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	32	44	

CURVE NO. 1
 PI STA 20+93.16 N 18784.780
 ?-24°20'14"LT E 14625.563
 D-02°00'00"
 R-2864.79'
 T-617.75'
 L-1216.87'
 E-65.85'
 E-0.027'/FT
 EMAX-0.04'/FT



MCDOT "EST. MATERIAL" QUAN. (This Sheet Only)
 THE CONTRACTOR IS TO REFER TO THE SPECIFICATION BOOK TO SEE IF THIS PROJECT IS TO BE STRIPED USING PAINT, THERMOPLASTIC TAPE OR ANY COMBINATION THERE OF.

PAVEMENT MARKING (BASED ON 4" LINE)	RAISED PAVEMENT MARKERS (R.P.M.)	MCDOT LEGEND
"LONG LINE"	TYPE A - WHITE (NON-REFLECTIVE)	○ - 17 ±EA
WHITE - 3307 ±LF	TYPE AY - YELLOW (NON-REFLECTIVE)	⊙ - 7 ±EA
YELLOW - 3848 ±LF	TYPE C - CLEAR/RED (REFLECTIVE)	□ - 0 ±EA
TOTAL - 7155 ±LF	TYPE D - YELLOW, 2-WAY (REFLECTIVE)	⊞ - 0 ±EA
"SHORT LINE"	TYPE G - CLEAR, 1-WAY (REFLECTIVE)	⊞ - 0 ±EA
WHITE - 360 ±LF	TYPE H - YELLOW, 1-WAY (REFLECTIVE)	⊞ - 0 ±EA
YELLOW - 0 ±LF	TYPE H - YELLOW, 1-WAY (REFLECTIVE)	⊞ - 0 ±EA
TOTAL - 360 ±LF	TYPE H - YELLOW, 1-WAY (REFLECTIVE)	⊞ - 0 ±EA
"GRAND TOTAL"	GRAND TOTAL	24 ±EA
7515 ±LF		

TAPE (TYPE II) (BASED ON 4" LINE)	ARROWS	LEGENDS	SYMBOLS
WHITE - N/A ±LF	LEFT - 1 ±EA	(A LEGEND IS A "SINGLE" WORD, IE. STOP, ONE WAY, STOP AHEAD IS TWO LEGENDS, ETC.)	(SYMBOLS ARE FOR MARKINGS & BIKE LANE MARKINGS, ETC.)
YELLOW - N/A ±LF	RIGHT - 0 ±EA		
TOTAL - N/A ±LF	TOTAL - 1 ±EA	TOTAL - N/A	TOTAL - N/A

RAISED MEDIANS & ISLANDS (In Roadways / Intersections)
 YELLOW - N/A ±EA WHITE - N/A ±EA TOTAL - N/A ±EA

RPM NOTE: REFLECTORIZED MARKERS SHALL BE PLACED SO THAT ITS REFLECTIVE FACE IS FACING AND IS PERPENDICULAR TO TRAFFIC.

NO PASSING ZONE NOTES: ALL NO PASSING ZONES SHOWN ON THESE PLANS WILL BE LAYED OUT IN THE FIELD BY ENGINEER. STRIPING QUANTITIES COULD VARY.

CONTRACTOR'S (BID) QUANTITIES
 THE CONTRACTOR IS TO USE THE QUANTITIES LISTED BELOW WHEN BIDDING THIS STRIPING PROJECT. ALL QUAN. HAVE BEEN INCREASED BY 10% TO COVER FIELD ADJUSTMENTS.

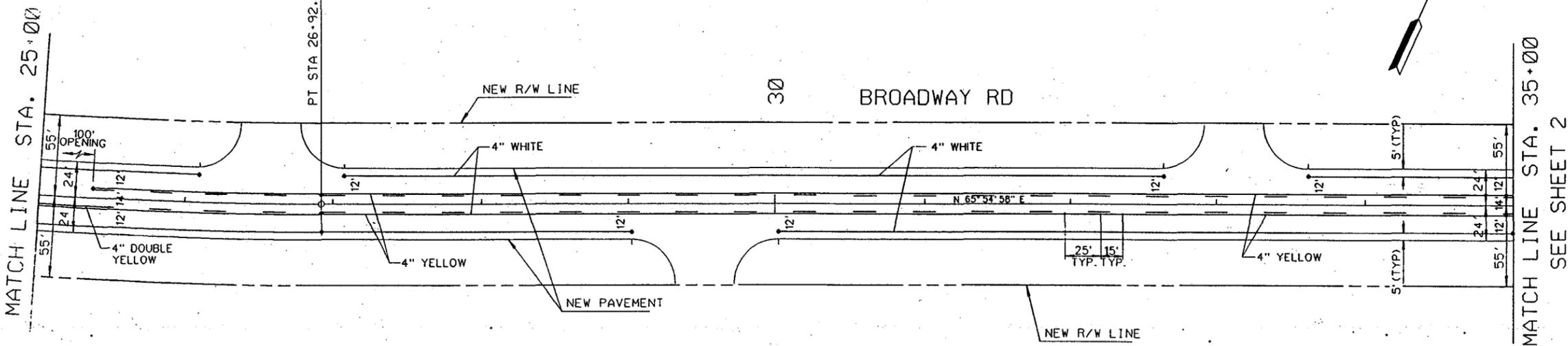
PAVEMENT MARKING (BASED ON 4" LINE)	RAISED PAVEMENT MARKERS (R.P.M.)	MCDOT LEGEND
"LONG LINE"	TYPE A - WHITE (NON-REFLECTIVE)	○ - 50 ±EA
WHITE - 8000 ±LF	TYPE AY - YELLOW (NON-REFLECTIVE)	⊙ - 19 ±EA
YELLOW - 10,930 ±LF	TYPE C - CLEAR/RED (REFLECTIVE)	□ - 0 ±EA
TOTAL - 18,930 ±LF	TYPE D - YELLOW, 2-WAY (REFLECTIVE)	⊞ - 0 ±EA
"SHORT LINE"	TYPE G - CLEAR, 1-WAY (REFLECTIVE)	⊞ - 0 ±EA
WHITE - 581 ±LF	TYPE H - YELLOW, 1-WAY (REFLECTIVE)	⊞ - 0 ±EA
YELLOW - 0 ±LF	TYPE H - YELLOW, 1-WAY (REFLECTIVE)	⊞ - 0 ±EA
TOTAL - 581 ±LF	TYPE H - YELLOW, 1-WAY (REFLECTIVE)	⊞ - 0 ±EA
"GRAND TOTAL"	GRAND TOTAL	69 ±EA
19,511 ±LF		

TAPE (TYPE II) (BASED ON 4" LINE)	ARROWS	LEGENDS	SYMBOLS
WHITE - N/A ±LF	LEFT - 2 ±EA	(A LEGEND IS A "SINGLE" WORD, IE. STOP, ONE WAY, STOP AHEAD IS TWO LEGENDS, ETC.)	(SYMBOLS ARE FOR MARKINGS & BIKE LANE MARKINGS, ETC.)
YELLOW - N/A ±LF	RIGHT - 0 ±EA		
TOTAL - N/A ±LF	TOTAL - 2 ±EA	TOTAL - N/A	TOTAL - N/A

RAISED MEDIANS & ISLANDS (In Roadways / Intersections)
 YELLOW - N/A ±EA WHITE - N/A ±EA TOTAL - N/A ±EA

(PAVEMENT MARKING REMOVAL)
 FROM STA. 11+29 TO STA. 16+50
 (43rd AVENUE ONLY)
 REMOVE "ALL" EXISTING PAVEMENT MARKINGS (EXAM: STRIPING, X-WALKS, "R R" X-INGS, RPM'S, ETC) IN ACCORDANCE TO SECTION 460 OF THE SPECIAL PROVISION.

ALL NO-PASSING ZONES WILL BE LAYED OUT IN THE FIELD BY THE ENGINEER.
 THE NPZ SHOWN ON THESE PLANS ARE SUBJECT TO CHANGE.



Broadway Road - 43rd Ave to 1/2 mi. W. of 35th Ave.
 Rural Minor Collector Road (Design Speed 50 MPH)

Broadway Road - 1/2 mi. W. of 35th Ave. to 27th Ave.
 Urban Minor Collector Road (Design Speed 45 MPH)

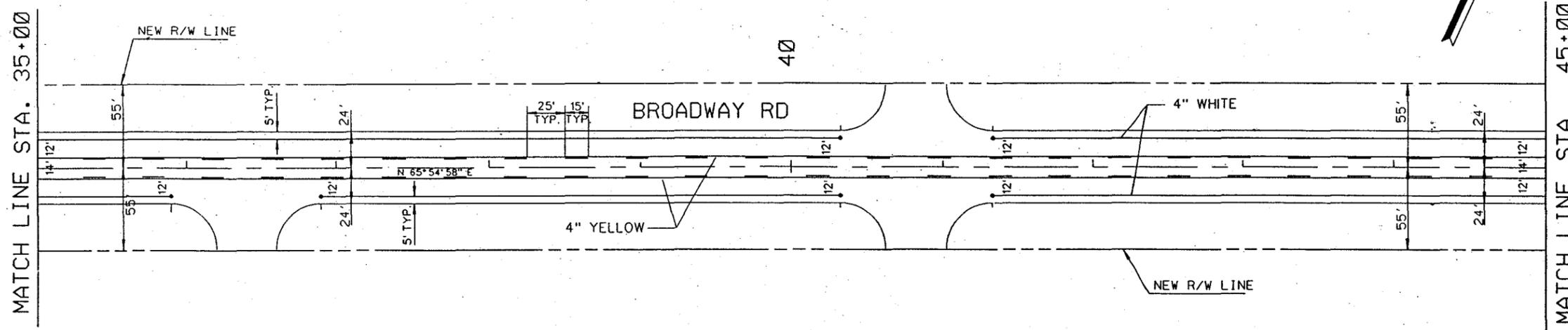
PROPOSED STRIPING AS OF 07/06/94
 EXISTING STRIPING AS OF
 STRIPING DESIGN SHEET 1 OF 3

NO.	REVISION	BY	DATE
MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION TRAFFIC ENGINEERING DIVISION BROADWAY ROAD 43rd AVE. to 35th AVE. PROJECT NO. 68237			
		BY Ron Nell Ron Nell Monica Beerman P.E.	DATE 07/06/94 07/06/94 07/20/94
STRIPING DESIGN SHEET STA 15+00 TO 35+00			SHEET OF 32 44

BROADWAY ROAD
43RD AVE. TO 35TH AVE.
MARICOPA COUNTY, ARIZONA

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	33	44	

20 0 20 40
Horz Scale in Feet



MCDOT "EST. MATERIAL" QUAN. (This Sheet Only)
THE CONTRACTOR IS TO REFER TO THE SPECIFICATION BOOK TO SEE IF THIS PROJECT IS TO BE STRIPED USING PAINT, THERMOPLASTIC, TAPE OR ANY COMBINATION THERE OF.

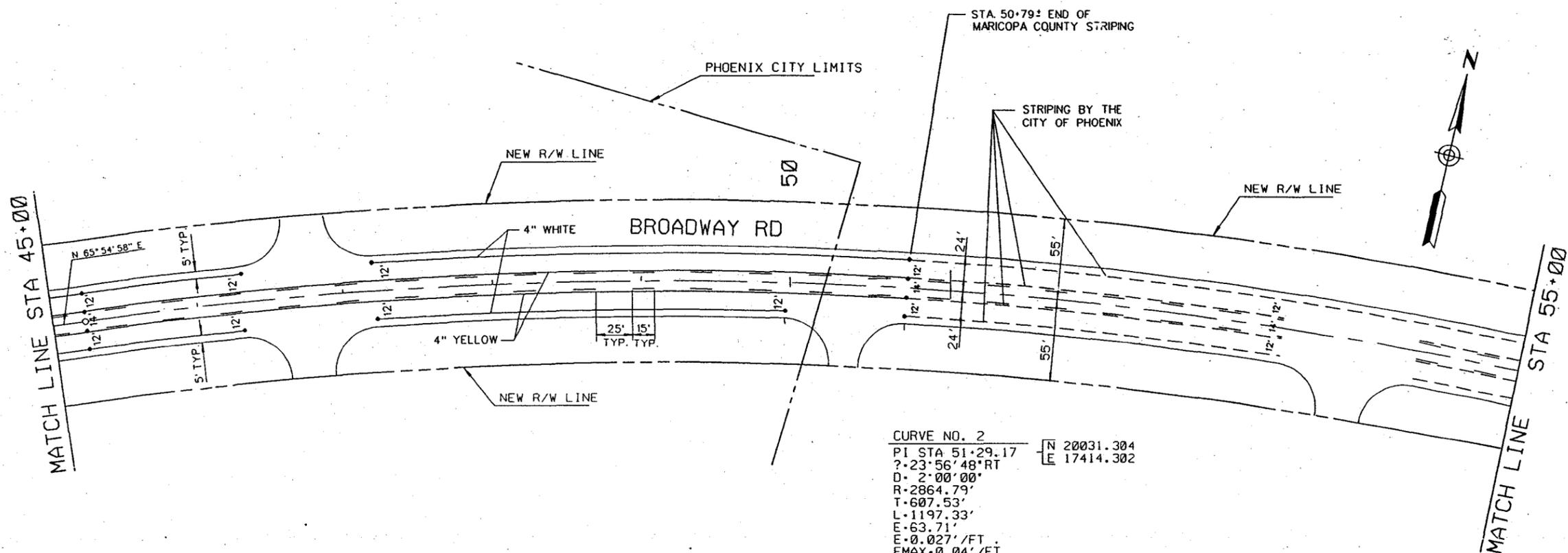
PAVEMENT MARKING (BASED ON 1/2 LINE)	RAISED PAVEMENT MARKERS (R.P.M.)	MCDOT LEGEND
"LONG LINE" WHITE - 2552 ± LF YELLOW - 4358 ± LF TOTAL - 6910 ± LF	TYPE A - WHITE (NON-REFLECTIVE) ○ - 18 ± EA TYPE AY - YELLOW (NON-REFLECTIVE) ⊙ - 4 ± EA TYPE C - CLEAR/RED (REFLECTIVE) □ - 0 ± EA TYPE D - YELLOW, 2-WAY (REFLECTIVE) ⊞ - 0 ± EA TYPE G - CLEAR, 1-WAY (REFLECTIVE) ⊞ - 0 ± EA TYPE H - YELLOW, 1-WAY (REFLECTIVE) ⊞ - 0 ± EA	GRAND TOTAL - 18 ± EA
"SHORT LINE" WHITE - 0 ± LF YELLOW - 0 ± LF TOTAL - 0 ± LF		
"GRAND TOTAL" 6910 ± LF	GRAND TOTAL - 18 ± EA	

TAPE (TYPE II) (BASED ON 1/2 LINE)	ARROWS (LEFT - N/A ± EA, RIGHT - N/A ± EA, OTHER - N/A ± EA)	LEGENDS (A LEGEND IS A "SINGLE" WORD, E.G. SLOW, ONE WAY, STOP AHEAD, ETC.)	SYMBOLS (FOR MARKINGS & BIKES, ETC.)
WHITE - N/A ± LF YELLOW - N/A ± LF TOTAL - N/A ± LF			

RAISED MEDIANS & ISLANDS (In Roadways / Intersections)
YELLOW - N/A ± EA, WHITE - N/A ± EA, TOTAL - N/A ± EA

RPM NOTE: REFLECTORIZED MARKERS SHALL BE PLACED SO THAT ITS REFLECTIVE FACE IS FACING AND IS PERPENDICULAR TO TRAFFIC.

NO PASSING ZONE NOTES: ALL NO PASSING ZONES SHOWN ON THESE PLANS WILL BE LAYED OUT IN THE FIELD BY ENGINEER. STRIPING QUANTITIES COULD VARY.



CURVE NO. 2
PI STA 51+29.17 N 20031.304
? - 23° 56' 48" RT E 17414.302
D - 2° 00' 00"
R - 2864.79'
T - 607.53'
L - 1197.33'
E - 63.71'
E - 0.027' / FT
EMAX - 0.04' / FT

PROPOSED STRIPING AS OF 07/06/94
EXISTING STRIPING AS OF
STRIPING DESIGN SHEET 2 OF 3

NO.	REVISION	BY	DATE

MARICOPA COUNTY
DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING DIVISION

BROADWAY ROAD
43RD AVENUE TO 35TH AVENUE
PROJECT NO. 68237

	BY	DATE
DESIGNED	Ron Nell	07/06/94
DRAWN	Ron Nell	07/06/94
CHECKED	Monica Beeman P.E.	07/20/94

STRIPING DESIGN SHEET
STA. 35+00.00 TO 50+26 ± SHEET OF 33 44

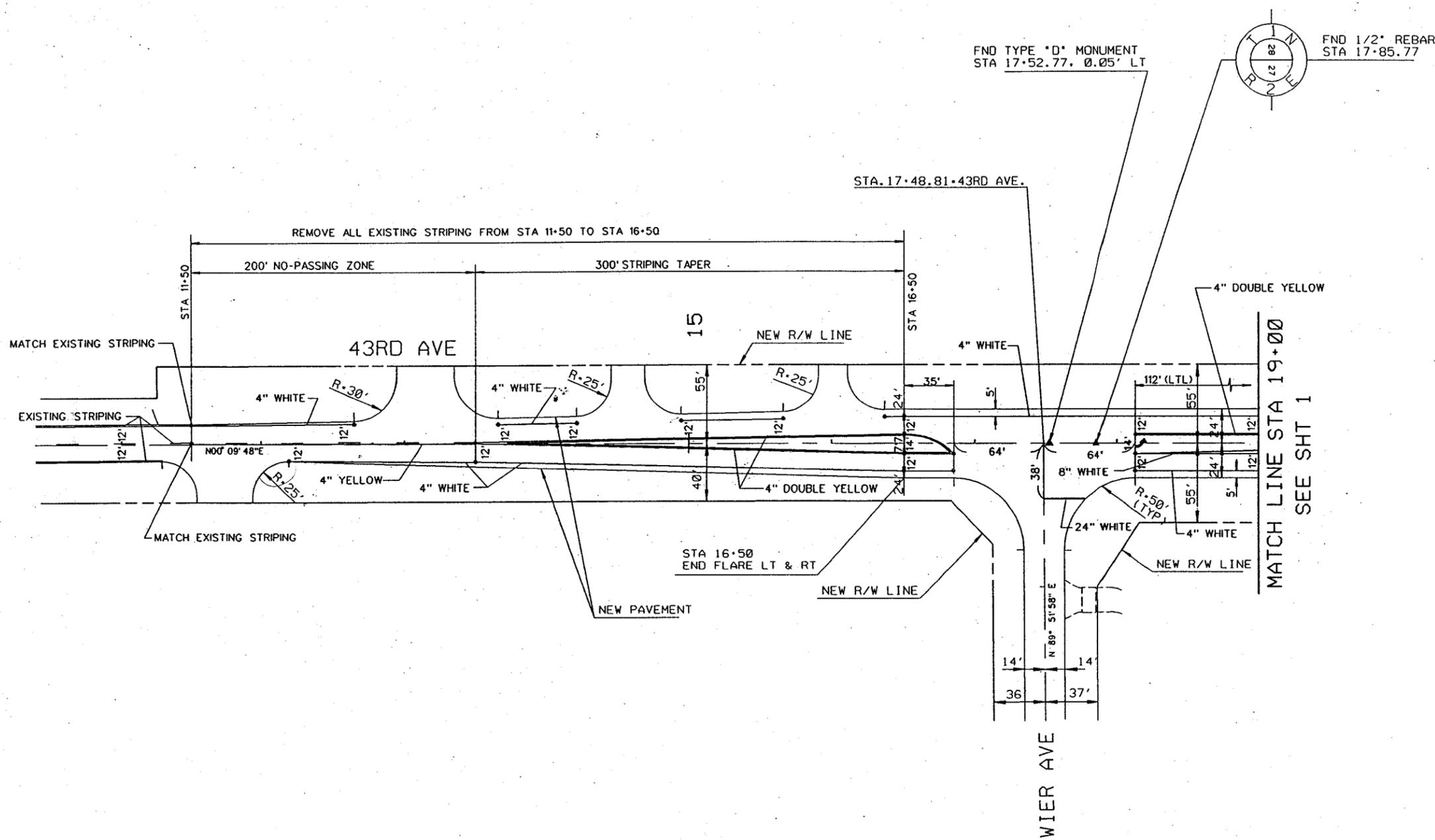
68237S2.DGN 07/06/94

BROADWAY ROAD
43RD AVE TO 35TH AVE
MARICOPA COUNTY, ARIZONA

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	34	44	



20 0 20 40
Horz Scale in Feet



MCDOT "EST. MATERIAL" QUAN. (T/N's Sheet Only)
THE CONTRACTOR IS TO REFER TO THE SPECIFICATION BOOK TO SEE IF THIS PROJECT IS TO BE STRIPED USING PAINT, THERMOPLASTIC, TAPE OR ANY COMBINATION THERE OF.

PAVEMENT MARKING (BASED ON 4" LINE)	RAISED PAVEMENT MARKERS (RPM)	MCDOT LEGEND
"LONG LINE"	TYPE A - WHITE (NON-REFLECTIVE)	○ - 14 ± ea
WHITE - 1430 ± lf.	TYPE AY - YELLOW (NON-REFLECTIVE)	⊙ - 6 ± ea
YELLOW - 1730 ± lf.	TYPE C - CLEAR/RED (REFLECTIVE)	■ - 0 ± ea
TOTAL - 3140 ± lf.	TYPE D - YELLOW, 2-WAY (REFLECTIVE)	⊞ - 0 ± ea
"SHORT LINE"	TYPE G - CLEAR, 1-WAY (REFLECTIVE)	□ - 0 ± ea
WHITE - 168 ± lf.	TYPE H - YELLOW, 1-WAY (REFLECTIVE)	⊠ - 0 ± ea
YELLOW - 0 ± lf.		
TOTAL - 168 ± lf.		
"GRAND TOTAL"	GRAND TOTAL	20 ± ea
3308 ± lf.		

TAPE (TYPE II) (BASED ON 4" LINE)	ARROWS	LEGENDS	SYMBOLS
WHITE - N/A ± lf.	LEFT - 1 ± ea	1A LEGEND IS A "SINGLE" WORD.	SYMBOLS ARE FOR MARKINGS & BIKELINE MARKINGS, ETC.
YELLOW - N/A ± lf.	RIGHT - 0 ± ea	1E, SLOW, ONLY, STOP AHEAD IS TWO LEGENDS, ETC.	
TOTAL - N/A ± lf.	OTHER - 0 ± ea		
	TOTAL - 1 ± ea	TOTAL - N/A	TOTAL - N/A

RAISED MEDIANS & ISLANDS (in Roadways / Intersections)
YELLOW - N/A ± ea WHITE - N/A ± ea TOTAL - N/A ± ea

RPM NOTE: REFLECTORIZED MARKERS SHALL BE PLACED SO THAT ITS REFLECTIVE FACE IS FACING AND IS PERPENDICULAR TO TRAFFIC.

NO PASSING ZONE NOTES: ALL NO PASSING ZONES SHOWN ON THESE PLANS WILL BE LAYED OUT IN THE FIELD BY ENGINEER. STRIPING QUANTITIES COULD VARY.

(PAVEMENT MARKING REMOVAL)
FROM STA. 11+29 TO STA. 16+50
REMOVE "ALL" EXISTING PAVEMENT MARKINGS (EXAM: STRIPING, X-WALKS, "R R" X-INGS, RPM'S, ETC) IN ACCORDANCE TO SECTION 460 OF THE SPECIAL PROVISION.

ALL NO-PASSING ZONES WILL BE LAYED OUT IN THE FIELD BY THE ENGINEER.
THE NPZ SHOWN ON THESE PLANS ARE SUBJECT TO CHANGE.

MATCH LINE STA 19+00
SEE SHT 1

NO.	REVISION	BY	DATE
MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION TRAFFIC ENGINEERING DIVISION BROADWAY ROAD 43rd AVE. to 35th AVE. PROJECT NO. 68237			
DESIGNED	Ron Nell	07/06/94	
DRAWN	Ron Nell	07/06/94	
CHECKED	Monica Beeman P.E.	07/20/94	
STRIPING DESIGN SHEET		SHEET OF	
STA. 15+00 TO 35+00		34 44	

PROPOSED STRIPING AS OF 07/08/94
EXISTING STRIPING AS OF _____
STRIPING DESIGN SHEET 3 OF 3

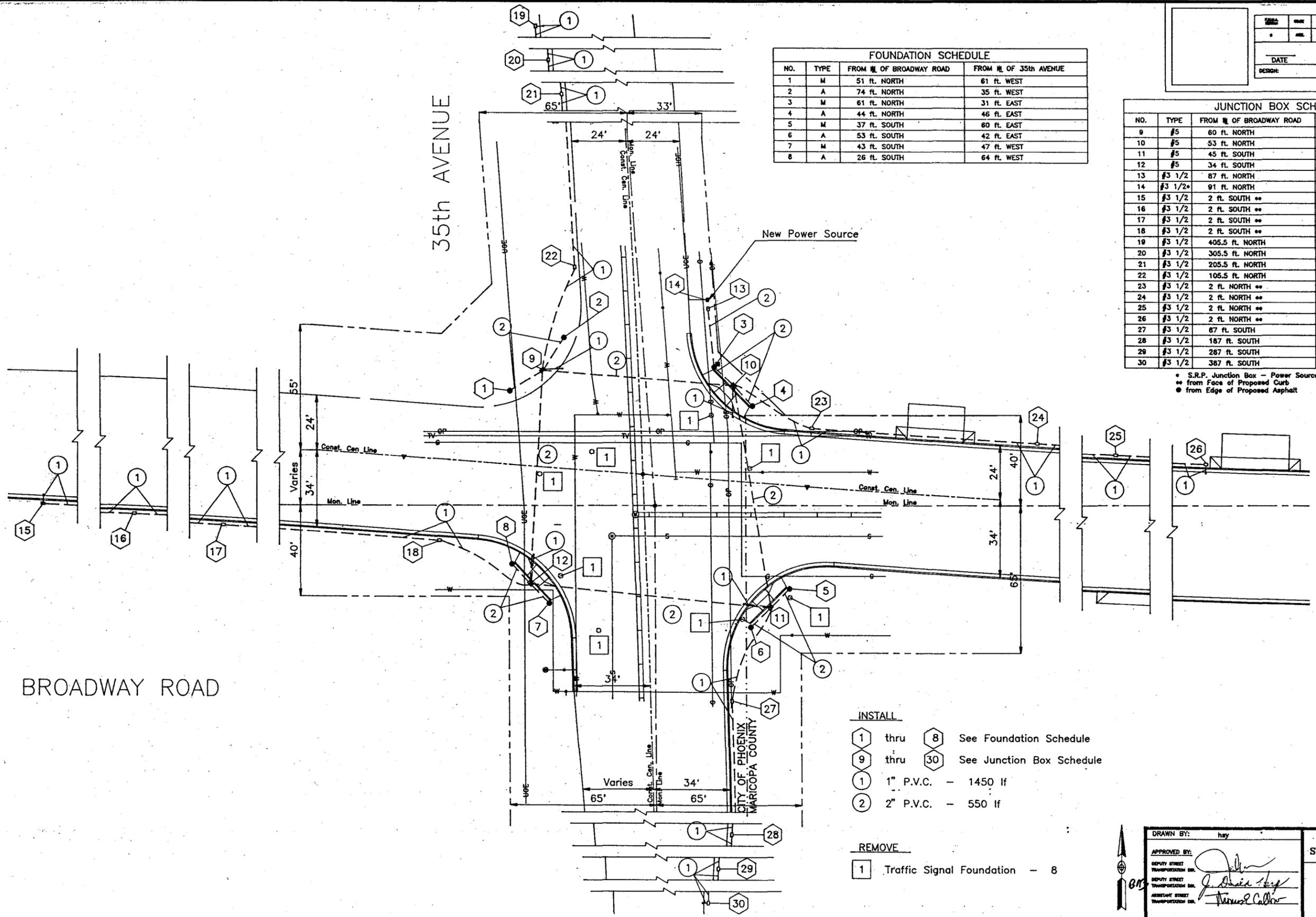
68237S3A.DGN 07/08/94

PROJECT NO.	68237	SHEET NO.	35	TOTAL SHEETS	44
DATE	CONSULTING ENGINEER				
DESIGNER	DRAWER	CHECKER			

FOUNDATION SCHEDULE			
NO.	TYPE	FROM # OF BROADWAY ROAD	FROM # OF 35th AVENUE
1	M	51 ft. NORTH	61 ft. WEST
2	A	74 ft. NORTH	35 ft. WEST
3	M	61 ft. NORTH	31 ft. EAST
4	A	44 ft. NORTH	46 ft. EAST
5	M	37 ft. SOUTH	60 ft. EAST
6	A	53 ft. SOUTH	42 ft. EAST
7	M	43 ft. SOUTH	47 ft. WEST
8	A	26 ft. SOUTH	64 ft. WEST

JUNCTION BOX SCHEDULE			
NO.	TYPE	FROM # OF BROADWAY ROAD	FROM # OF 35th AVENUE
9	#5	60 ft. NORTH	45 ft. WEST
10	#5	53 ft. NORTH	39 ft. EAST
11	#5	45 ft. SOUTH	51 ft. EAST
12	#5	34 ft. SOUTH	56 ft. WEST
13	#3 1/2	87 ft. NORTH	30 ft. EAST
14	#3 1/2	91 ft. NORTH	30 ft. EAST
15	#3 1/2	2 ft. SOUTH **	395 ft. WEST
16	#3 1/2	2 ft. SOUTH **	295 ft. WEST
17	#3 1/2	2 ft. SOUTH **	185 ft. WEST
18	#3 1/2	2 ft. SOUTH **	95 ft. WEST
19	#3 1/2	405.5 ft. NORTH	2 ft. WEST ●
20	#3 1/2	305.5 ft. NORTH	2 ft. WEST ●
21	#3 1/2	205.5 ft. NORTH	2 ft. WEST ●
22	#3 1/2	105.5 ft. NORTH	2 ft. WEST ●
23	#3 1/2	2 ft. NORTH **	71 ft. EAST
24	#3 1/2	2 ft. NORTH **	171 ft. EAST
25	#3 1/2	2 ft. NORTH **	271 ft. EAST
26	#3 1/2	2 ft. NORTH **	371 ft. EAST
27	#3 1/2	67 ft. SOUTH	2 ft. EAST **
28	#3 1/2	187 ft. SOUTH	2 ft. EAST ●
29	#3 1/2	287 ft. SOUTH	2 ft. EAST ●
30	#3 1/2	387 ft. SOUTH	2 ft. EAST ●

● S.R.P. Junction Box - Power Source
 ** from Face of Proposed Curb
 ● from Edge of Proposed Asphalt



- INSTALL**
- ① thru ⑧ See Foundation Schedule
 - ⑨ thru ⑩ See Junction Box Schedule
 - ① 1" P.V.C. - 1450 lf
 - ② 2" P.V.C. - 550 lf
- REMOVE**
- ① Traffic Signal Foundation - 8



DRAWN BY: hsy	CITY OF PHOENIX, ARIZONA STREET TRANSPORTATION DEPT.	
APPROVED BY: <i>[Signature]</i>	TRAFFIC SIGNAL FOUNDATION BROADWAY RD. & 35th AVE.	
WORK ORDER NO.: 096660	SCALE: 1" = 20'	FILE NO.
PROJECT NO.: P-903427	DATE: APRIL 94	5002
SHEET 2 OF 2 SHEETS		

C:\DVG\5002.DVG JUN/30/94 2:50pm

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	36	44	

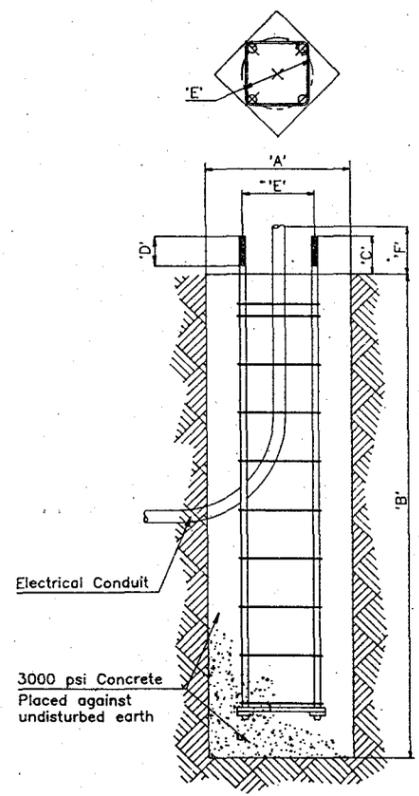
- GENERAL NOTES:
- THE CONTRACTOR SHALL NOTIFY THE TRAFFIC SIGNAL SHOP TEN (10) WORKING DAYS PRIOR TO CONSTRUCTION AT INTERSECTION(S) AT 262-6733.
 - CONTRACTOR IS TO REQUEST TRAFFIC SIGNAL LOCATE MARKING BY CALLING (602) 262-6733, BETWEEN THE HOURS OF 7:00 AM AND 5:00 PM MONDAY THRU FRIDAY AT LEAST TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION.
 - ALL EXISTING SIGNAL EQUIPMENT SHALL REMAIN IN PLACE AND IN OPERATION UNTILL NEW SIGNAL EQUIPMENT HAS BEEN INSTALLED AND MADE OPERATIONAL.
 - THE CONTRACTOR IS TO INSTALL CONDUIT, CONCRETE JUNCTION BOXES AND FOUNDATIONS AT LOCATIONS SHOWN ON THE PLANS. THE TRAFFIC SIGNAL SHOP WILL FURNISH ALL BOLTS AND/OR CAGES FOR FOUNDATIONS, EXCEPT FOR 'Q' & 'R' POLES.
 - ALL UNDERGROUND CONDUIT SHALL BE RIGID POLY-VINYL CHLORIDE AND SHALL CONFORM TO SECTION 732 OF THE A.D.O.T. GENERAL SPECIFICATIONS FOR TRAFFIC SIGNAL AND HIGHWAY LIGHTING SYSTEMS - 1990 EDITION. EACH UNUSED CONDUIT SHALL HAVE ONE (1) BARE COPPER BOND #10 INSTALLED THROUGHOUT.
 - ALL CONDUIT SHALL BE INSTALLED BETWEEN 24" AND 36" BELOW FINISHED GRADE, IN STRAIGHT LINES, JUNCTION BOX TO JUNCTION BOX OR JUNCTION BOX TO POLE BASE, WITH ONE (1) 90 DEGREE SWEEP ON EACH END AS SPECIFIED IN THE PLANS. ALL CONDUIT ENTERING JUNCTION BOXES SHALL BE VERTICAL, WITH THE TOP OF CONDUIT 6" BELOW THE BOTTOM OF THE JUNCTION BOX COVER. CONDUIT IN ALL FOUNDATIONS SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE CENTER OF THE FOUNDATION.
 - ALL JUNCTION BOX LIDS SHALL BE IMPRINTED TO SAY "TRAFFIC SIGNALS". A MINIMUM DEPTH OF EIGHTEEN (18) INCHES OF THREE QUARTER (3/4) INCH ROCK SHALL BE INSTALLED UNDER EACH JUNCTION BOX.
 - THE CONTRACTOR SHALL ADHERE TO SECTION V-B OF THE CITY OF PHOENIX "TRAFFIC BARRICADE MANUAL" AND THE D.O.T./F.H.W.A. "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AT ALL TIMES DURING CONSTRUCTION.
 - ALL CONDUIT SHALL BE INSPECTED BY THE CITY OF PHOENIX TRAFFIC SIGNAL LOCATORS OR FORMEN BEFORE BEING COVERED. ALL TRAFFIC SIGNAL POLE BASES SHALL BE INSPECTED BY THE TRAFFIC SIGNAL LOCATORS OR FORMEN BEFORE POURED. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE JOB FOREMAN TO REQUEST INSPECTION OR CALL THE TRAFFIC SIGNAL SHOP AT 262-6204 AND REQUEST INSPECTION BY A TRAFFIC SIGNAL LOCATOR.
 - ANY FOUNDATIONS OR JUNCTION BOXES WHICH MUST BE RELOCATED DUE TO UTILITY CONFLICTS MUST BE APPROVED BY THE TRAFFIC SIGNAL SUPERVISOR OR TRAFFIC SIGNAL FOREMAN.

UNDERGROUND LEGEND

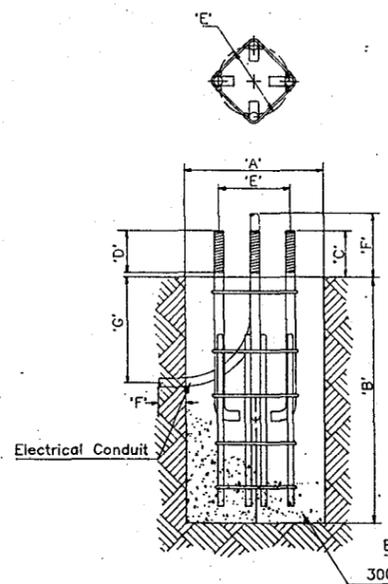
PROPOSED	EXISTING	
		No. 3 1/2 Junction Box (J.B.) A.D.O.T. T.S. 1-1
		No. 5 Junction Box (J.B.) A.D.O.T. 1-2
		Pole Foundation
		Controller Foundation
		P.V.C. Conduit designation
		Conduit or cable run
		Conduit stub out (See detail)
		Loop stub out
		Conduit splice

EQUIPMENT LEGEND

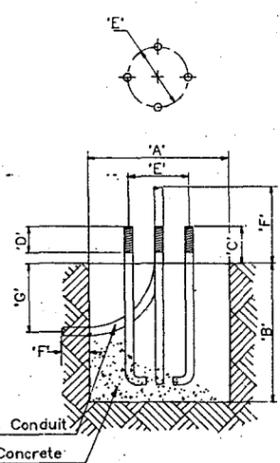
PROPOSED	EXISTING	
		Signal Pole
		Multi-use Pole
		Aerial cable
		Pole
		Head number
		Loop detector
		Traffic signal indication
		Traffic signal indication w/Arrow
		Pedestrian indication
		Pedestrian push button
		Pole w/Mast arm and traffic signal
		Pole w/Mast arm, luminaire and traffic signal (Signal mast arm 20' unless noted)
		Traffic signal controller



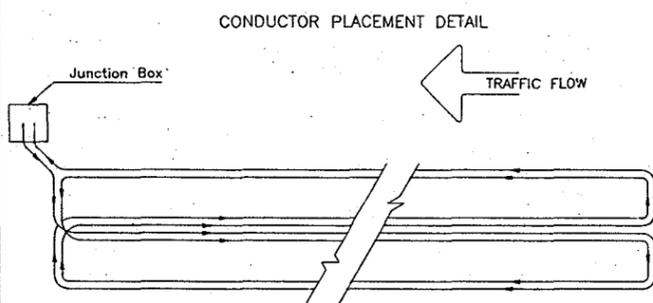
TYPE "Q" & "R"
POLE FOUNDATION DETAIL
(A.D.O.T. Q & R POLE FOUNDATION
TS 4-12 & 4-13 ARE
ACCEPTABLE SUBSTITUTES)
(NO SCALE)



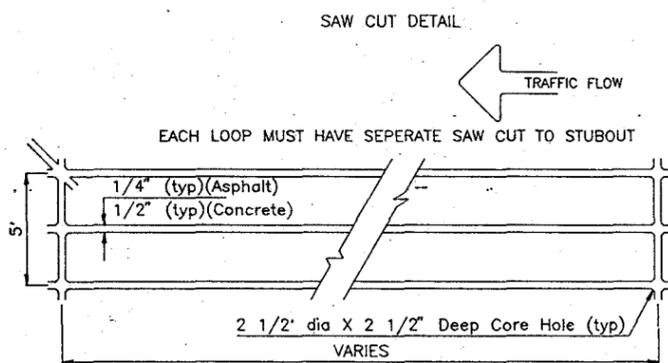
TYPE "M"
POLE FOUNDATION DETAIL
(NO SCALE)



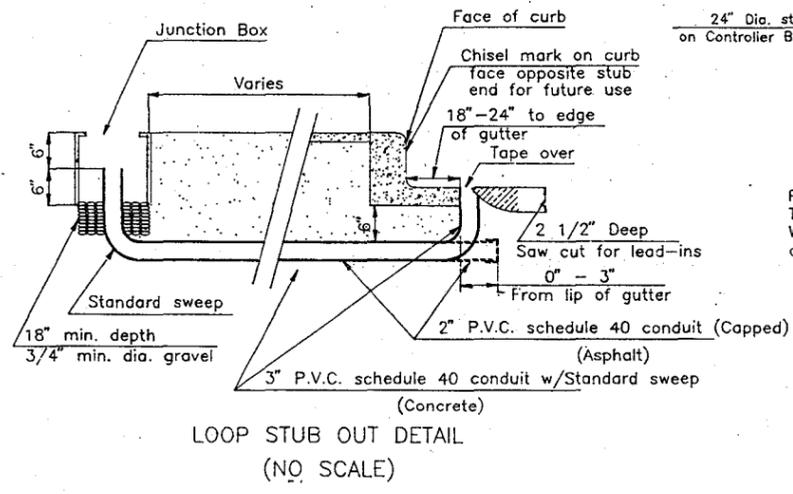
TYPE "A"
POLE FOUNDATION DETAIL
(NO SCALE)



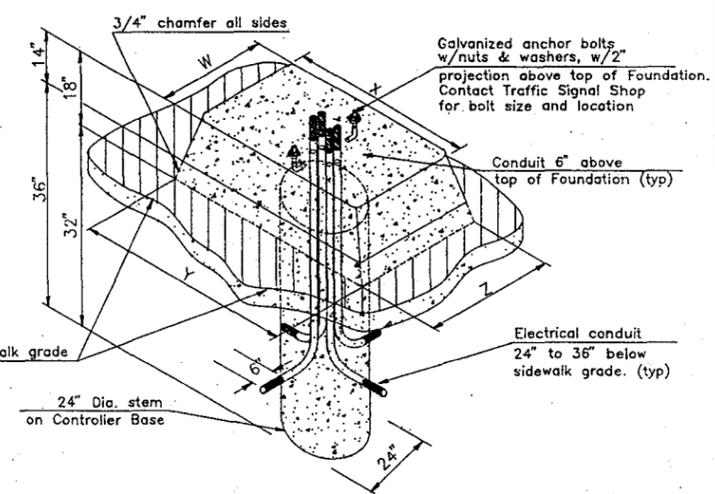
QUADRUPOLE LOOP CONFIGURATION DETAIL
(NO SCALE)



- NOTE:
- Conduit stubs UP through road surface on CONCRETE ONLY.
 - Conduit stubs OUT from curb below road surface on Asphalt.



LOOP STUB OUT DETAIL
(NO SCALE)



CONTROLLER FOUNDATION DETAIL
(NO SCALE)

Prior to construction of foundation contact Traffic Signal Shop at 262-6733 for dimensions W,X,Y, and Z and for specifications and location of anchor bolts and conduit.

POLE FOUNDATION DIMENSION SCHEDULE

FOUNDATION POLE TYPE	POLE DETAIL (ft.)			FOUNDATION DETAIL (in.)		BOLT DETAIL (in.)					CONDUIT DETAIL *	
	POLE HEIGHT	MAST ARM LENGTH	LUMINAIRE ADAPTABLE	'A' WIDTH	'B' DEPTH	DIAMETER	LENGTH OVERALL	'C' PROJECTION	'D' THREAD	'E' BOLT CIRCLE	'F' CLEAR	'G' MIN. DEPTH
TYPE 'A'	14	N/A	N/A	24	38	1	36	5	4	10 1/2	6	24
TYPE 'M'	20	20-35	YES	24	66	1 1/8	64	7	6	12 1/2	6	24
TYPE 'Q', & 'R'	20	40-55	YES	36	120	2	70	8 1/2	7 1/2	18	6	24

* CONDUIT SHALL ENTER 24" MINIMUM DEPTH, VERTICALLY THROUGH THE BOTTEM OF THE FOUNDATION

CITY OF PHOENIX, ARIZONA
STREET TRANSPORTATION DEPT.

TRAFFIC SIGNAL
DETAIL SHEET
DEVELOPER PROJECTS

SCALE: _____ FILE NO. _____
DATE: _____
SHEET 36 OF 44 SHEETS

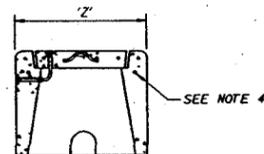
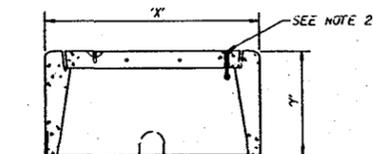
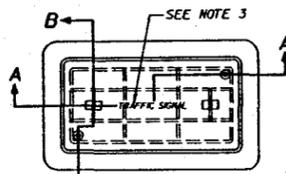
C:\DVP\SIGDET.DWG MAR 16/94 10:08am

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORDED DRAWING
9	AZ.	68237	37	44	

TABLE OF DIMENSIONS

PULL BOXES			
DIM.	*3/2	*5	*7
*W'	1 1/4'	2'	2'
*X'	19 1/4"	25"	35"
*Y'	12"	12"	12"
*Z'	1 3/4'	15"	22"

- ◇ *3/2 PULL BOX
 - *5 PULL BOX
 - ▭ *7 PULL BOX
- PLAN SYMBOLS



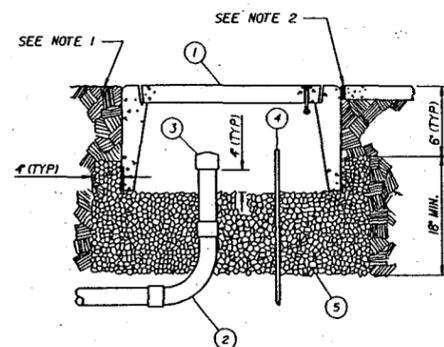
NOTES:

1. SEE THE SPECIFICATIONS FOR MATERIALS AND CONSTRUCTION.
2. COVERS SHALL BE SECURED WITH 1/2" BOLT'S, NUTS, AND WASHERS WHICH SHALL BE OF BRASS, STAINLESS STEEL OR OTHER CORROSION RESISTANT MATERIALS. NUTS SHALL BE RECESSED BELOW TOP SURFACE OF COVER.
3. THE WORDS "TRAFFIC SIGNAL" SHALL BE CAST ON PULL BOX COVER IN 1" HIGH LETTERS.
4. STEEL REINFORCING SHALL BE AS REGULARLY USED IN STANDARD PRODUCTS OF THE RESPECTIVE MANUFACTURER.
5. FOR TYPICAL PULL BOX INSTALLATION SEE DRAWING NO. S-201-2.

PULL BOX DETAIL

S-201-1

ITEM	QTY.	DESCRIPTION
1	1	PULL BOX
2	1	PVC ELECTRICAL CONDUIT, SCH. 40
3	1	PVC CAP
4	1	3/4" x 10' LONG GROUNDING ELECTRODE
5	1	1' SHORT GRADE ROCK



NOTES:

1. BACKFILL WITH EXCAVATED MATERIAL AND THOROUGHLY COMPACT.
2. EXPANSION JOINT MATERIAL SHALL BE USED AROUND PULL BOX WHEN INSTALLED IN CONCRETE AREA.
3. WHEN INSTALLING PVC CONDUIT IT SHALL ENTER NEAR SIDES OF PULLBOX.
4. ITEM 4 TO BE INSTALLED WHEN SPECIFIED.

TYPICAL PULL BOX INSTALLATION

S-201-2

NO.	REVISION	BY	DATE
MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION TRAFFIC ENGINEERING DIVISION			
BROADWAY ROAD 43RD AVENUE TO 35TH AVENUE PROJECT NO. 68237			
DESIGNED	BY	DATE	
DRAWN	TRAFFIC ENG. DIV.		
CHECKED			
TRAFFIC SIGNAL STANDARD DETAILS			SHEET OF 37 44

SALT RIVER PROJECT

IRRIGATION IMPROVEMENTS

SRP ENGINEERING FILE NO. RD-51048

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	38	44	

PHOENIX, ARIZONA

CUSTOMER: MARICOPA COUNTY DEPT. OF TRANSPORTATION
TEL. 506-2879

CUSTOMER'S ENGINEER: KIMLEY-HORN
TEL. 944-5500

SRP ENGINEER: ALEX RICHARDS
TEL. 236-4688

SRP WATERMASTER: BILL STINSON
TEL. 236-5074

LEGEND

PLAN SYMBOLS

	BENCHMARK
	SECTION CORNER
	SURVEY POINT (CALL OUT)
	SECTION LINE
	CONSTRUCTION BASE LINE
	PROPERTY OR RIGHT-OF-WAY LINE
	EASEMENT LINE
	EXISTING DITCH
	EXISTING IRRIGATION PIPE (SIZE & TYPE)
	EXISTING HEADWALL OR HEADWALL TRASHRACK
	EXISTING FIRE HYDRANT
	EXISTING WATER VALVE
	EXISTING METER (WATER-W / GAS-G)
	EXISTING WATER LINE
	EXISTING SEWER LINE
	EXISTING GAS LINE
	EXISTING TELEPHONE (DUCT OR CABLE)
	EXISTING UNDERGROUND ELECTRIC (DUCT OR CABLE)
	EXISTING MANHOLE (NON WUA)
	EXISTING STORM DRAIN
	EXISTING CATCH BASIN
	EXISTING UTILITY POLE
	EXISTING DOWN GUY
	EXISTING FENCE (WOOD)
	EXISTING FENCE (WIRE/NOT SPECIFIED)
	EXISTING FENCE (MASONRY)
	EXISTING TREE (TYPE)
	EXISTING STUMP
	EXISTING MAIL BOX
	PROPOSED FACILITIES
	EXISTING FACILITIES

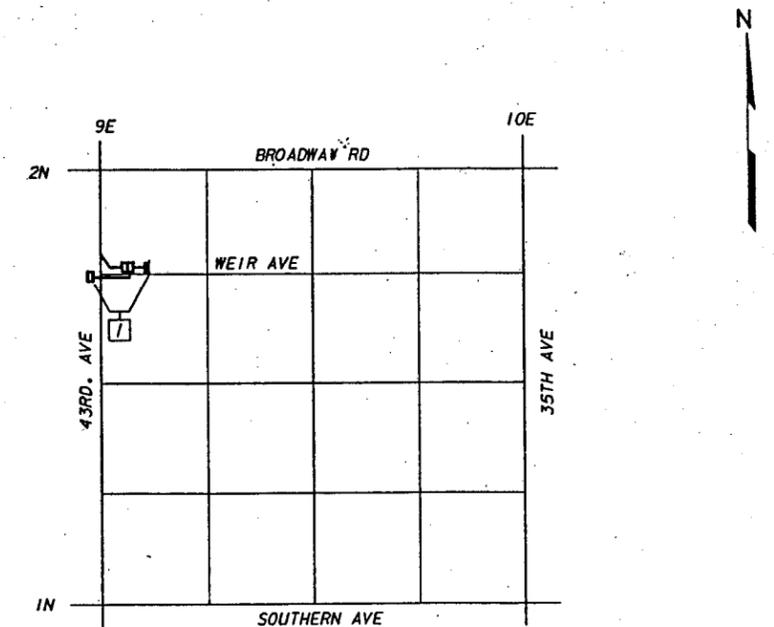
PROFILE SYMBOLS

	CENTERLINE OF ROAD
	LOW BANK
	BED
	AVERAGE GROUND LEFT
	AVERAGE GROUND RIGHT
	AVERAGE GROUND (ONE GIVEN)
	HIGH WATER
	BED - PRIVATE DELIVERY
	HIGH GROUND
	LOW GROUND
	BED - DRAIN DITCH
	CATCH BASIN
	PROPOSED UTILITY
	EXISTING UTILITY

GENERAL NOTES

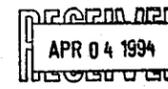
- THE CUSTOMER/CONTRACTOR IS RESPONSIBLE TO ASSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL SAFETY REGULATIONS.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT BLUESTAKE (263-1100) AND SUCH OTHER LOCATORS/UTILITIES AS NEEDED TO LOCATE AND FLAG ALL EXISTING UNDERGROUND UTILITIES.
- ALL TRENCHING BY SRP SHALL BE DONE IN ACCORDANCE WITH SRP'S "EXCAVATION SAFETY RESOURCE MANUAL".
- VERTICAL CONTROLS ARE BASED ON SEA-LEVEL DATUM AS DEFINED BY THE BENCHMARK ON EACH PLAN-PROFILE. VERTICAL CONTROLS MAY DIFFER BETWEEN PLAN-PROFILES. CHECK PLANS FOR ELEVATION EQUATIONS.
- STATIONS SHOWN ON THE PLAN-PROFILE ARE ALONG THE SECTION LINE UNLESS OTHERWISE NOTED.
- DIMENSIONS LOCATING IRRIGATION MANHOLES AND DELIVERY STRUCTURES ARE FROM THE SECTION LINE TO THE CENTERLINE OF THE MANHOLE AND TO THE FACE OF THE DELIVERY STRUCTURE RESPECTIVELY, UNLESS OTHERWISE NOTED.
- FACILITIES WHICH ARE NOT SPECIFICALLY LOCATED WITH ACTUAL HORIZONTAL AND VERTICAL CONTROLS ARE LOCATED ONLY APPROXIMATELY AND TO THE BEST AVAILABLE KNOWLEDGE.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL QUANTITIES AND ANY OTHER ITEMS AFFECTING HIS BID TO COMPLETE THE WORK SHOWN ON THE PLANS AND TO BASE HIS BID SOLELY UPON HIS OWN VERIFIED QUANTITIES, IRRESPECTIVE OF THE INFORMATION FURNISHED AS NOTED ABOVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE SRP ENGINEER PRIOR TO CONSTRUCTION OF ANY SIGNIFICANT DISCREPANCIES BETWEEN HIS ESTIMATED QUANTITIES AND THOSE SHOWN ON THE PLANS.
- ALL CONSTRUCTION WATER AND POWER SHALL BE OBTAINED AND HANDLED BY THE CONTRACTOR AT HIS OWN EXPENSE. THE CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENTS TO PROCURE AND TRANSPORT WATER TO THE CONSTRUCTION SITE. ALL TEMPORARY FACILITIES SHALL BE REMOVED PRIOR TO FINAL ACCEPTANCE BY SRP.
- THE SRP DOES NOT GUARANTEE THE LOCATION OR ELEVATION OF UTILITIES AND WILL NOT BE RESPONSIBLE FOR THEIR RELOCATION.
- THE CUSTOMER'S CONTRACTOR IS REQUIRED TO CALL THE SRP WATERMASTER FOR A PRECONSTRUCTION CONFERENCE IN ACCORDANCE WITH THE APPLICABLE SRP LICENSE OR CONSTRUCTION AGREEMENT PRIOR TO OBTAINING A CONSTRUCTION CLEARANCE AND STARTING CONSTRUCTION.
- LOCATION AND ELEVATION OF ALL BLUE STAKED UTILITIES ARE TO BE FIELD VERIFIED AND ALL CONFLICTING UTILITIES ARE TO BE RELOCATED PRIOR TO PIPE INSTALLATION.
- ELEVATIONS SHOWN FOR IRRIGATION MANHOLES ARE AT THE TOP OF THE PROPOSED SIDEWALK OR FINISHED ROADWAY GRADE AT THE CENTERLINE OF THE MANHOLE, UNLESS OTHERWISE NOTED. THE TOP OF THE MANHOLE TO BE STAKED BY THE CUSTOMER'S ENGINEER AND THE HORIZONTAL OFFSET CHECKED TO VERIFY THAT LOCATION IS IN CONFORMANCE WITH THE LATEST REVISIONS TO THE CITY'S PAVING PLANS. ALL OTHER STAKING BY SRP FORCES UNLESS NOTED OTHERWISE.
- ALL STAKING CONTROLS SHALL BE LEFT UNDISTURBED. THE CONTRACTOR SHALL CALL THE SRP ENGINEER TO REFERENCE AND RESET ANY CONTROL POINTS THAT HAVE TO BE DISTURBED. THE CONTRACTOR WILL BE CHARGED FOR RESTAKING IF ANY STAKES ARE DESTROYED.
- ANY QUESTIONS RELATIVE TO THE ACCURACY OF IMPROVEMENT INSTALLATION SHALL NOT BE RAISED SUBSEQUENT TO COMPLETION OF THE WORK UNLESS ALL SURVEY STAKES ARE MAINTAINED INTACT. SHOULD SUCH STAKES NOT BE PRESENT AND VERIFIED AS TO THEIR ORIGIN, NO CLAIM FOR ADDITIONAL COMPENSATION FOR CORRECTION SHALL BE PRESENTED TO ANY PARTY AND SUCH WORK SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- PIPE BEDDING SHALL BE CLASS 'C' OR BETTER AND BACKFILL SHALL BE TYPE 1 PER SRP SPECIFICATIONS FOR PRECAST PIPE, UNLESS NOTED OTHERWISE.
- ALL PRECAST CONCRETE PIPE SHALL BE IN ACCORDANCE WITH ASTM C-76 CLASS III OR ASTM C-14 UNLESS OTHERWISE NOTED AND MEET SRP SPECIFICATIONS FOR PRECAST PIPE.
- ALL CAST-IN-PLACE PIPE SHALL BE INSTALLED AND BACKFILLED IN ACCORDANCE WITH SRP SPECIFICATIONS FOR CAST-IN-PLACE PIPE.
- ALL DELIVERY STRUCTURES WILL BE INSTALLED BY SRP FORCES. ALLOW A MINIMUM OF 30 DAYS BETWEEN THE ISSUANCE OF SRP LICENSE OR NOTICE TO PROCEED AND THE INSTALLATION-OF-THE STRUCTURE.
- ALL EXISTING IRRIGATION FACILITIES DISTURBED BY NEW CONSTRUCTION SHALL BE RECONSTRUCTED TO CURRENT SRP STANDARDS.
- ALL WORK AND MATERIALS THAT DO NOT CONFORM TO THESE PLANS, SPECIFICATIONS AND APPLICABLE SRP LICENSES / CONSTRUCTION AGREEMENTS, ARE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
- IF THERE IS A CONFLICT BETWEEN THE PROJECT SPECIFICATIONS, THE GOVERNING AUTHORITY'S LAWS, PERMITS AND THESE PLANS, THE HIGHEST REQUIREMENT SHALL APPLY.
- ALL DUST AND TRAFFIC CONTROLS REQUIRED BY THE LOCAL GOVERNING AGENCY WILL BE OBTAINED AND COORDINATED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- FOR DRY UP INFORMATION, CONTACT THE SRP WATERMASTER.

KEY PLAN



SEC 27 T1N R2E

FOR REFERENCE ONLY



PLAN INDEX

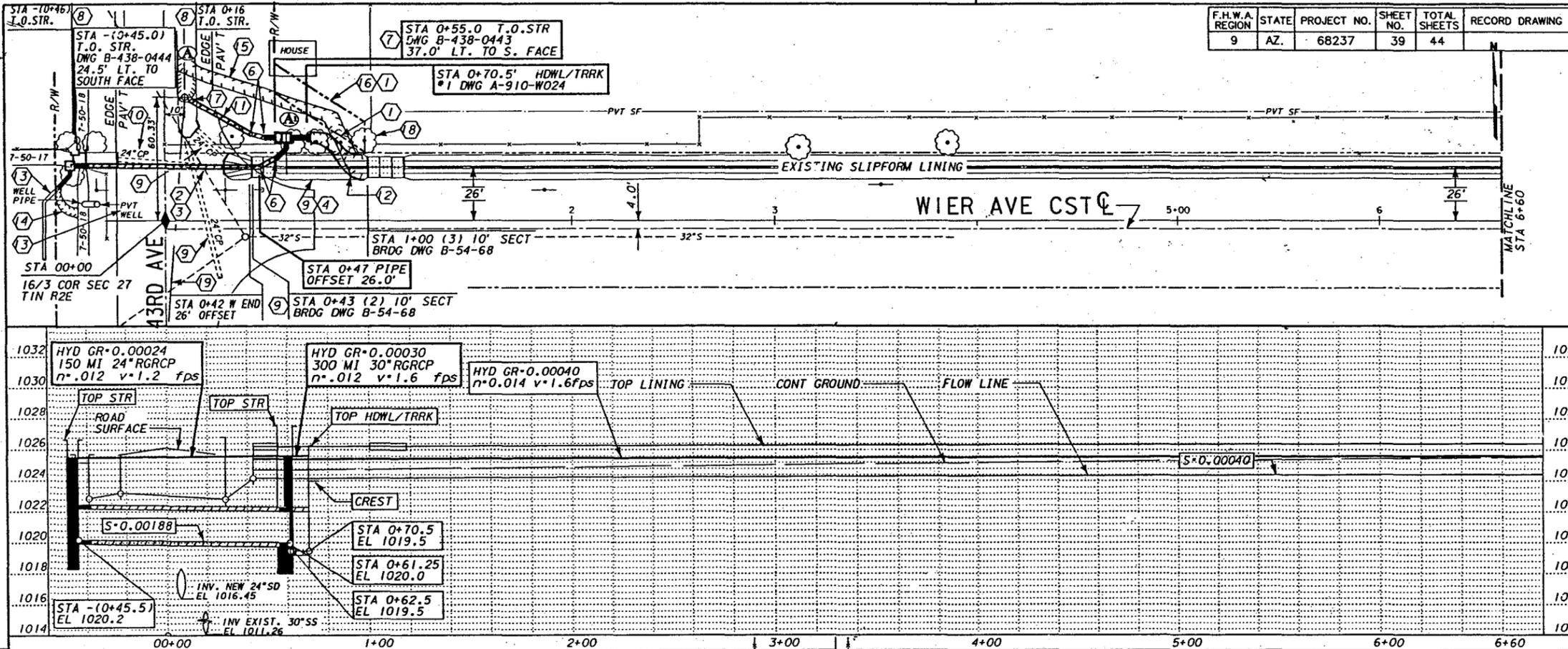
- PLAN/PROFILE(S) SHEET [2]
 MANHOLE TURNOUT STR SHEET [3] THRU [5]
 PRECAST PIPELINE TURNOUT STR [6] THRU [8]
 HEADWALL TRASHRACK [9]

0	RD-51048	AAR	MWL						
REV NO.	JOB NO.	DSGN ENGR	DFTR	VAX UP BY	ENGR CHK	ENGR APPD	ISSUE AUTH	DATE	

SALT RIVER PROJECT
WATER ENGINEERING ♦ PHOENIX, ARIZONA

COVER SHEET
FOR
PROJ# RD-51048

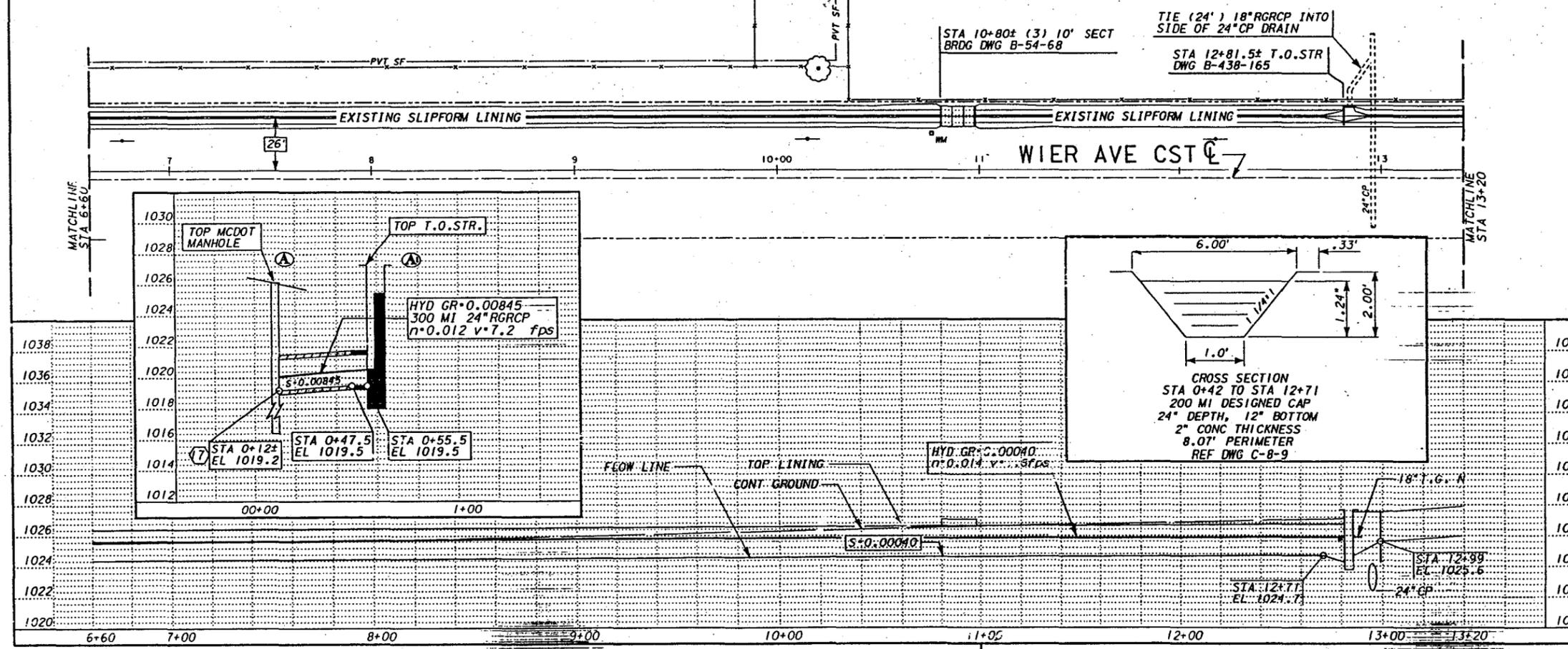
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CV	Y-3	22X34	A-910-W034



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	39	44	

CONSTRUCTION NOTES

- CUSTOMER'S ENGINEER TO STAKE PROPERTY LINES OR EASEMENT LINES PRIOR TO SRP STAKING ALIGNMENT OF PROPOSED IRRIGATION PIPELINE. CUSTOMER TO MAINTAIN STAKING FOR IRRIGATION OF SRP PIPELINE CONSTRUCTION.
- LOCATION AND ELEVATION OF ALL BLUESTAKED UTILITIES ARE TO BE FIELD VERIFIED AND ALL CONFLICTING UTILITIES ARE TO BE RELOCATED PRIOR TO PIPELINE CONSTRUCTION.
- PROPOSED OR EXISTING UNDERGROUND UTILITIES MUST CLEAR SRP'S PIPELINE A MINIMUM OF ONE FOOT VERTICALLY AND TWO HORIZONTALLY. IF EXISTING UTILITIES DO NOT MEET CLEARANCE REQUIREMENTS, THEY ARE TO BE RELOCATED TO CLEAR SRP'S PROPOSED FACILITIES AT THE CUSTOMER'S EXPENSE PRIOR TO START OF CONSTRUCTION.
- REMOVE AND DISPOSE OF EXISTING CONCRETE DITCH. FILL WITH CLEAN BACKFILL MATERIAL, AND COMPACT AS REQUIRED BY SRP'S STANDARD SPECIFICATIONS FOR PIPELINE CONSTRUCTION.
- INSTALLATION OF PIPE AS INDICATED ON THIS PLAN SHALL CONFORM WITH THE FOLLOWING SRP STANDARD SPECIFICATIONS: PRECAST CONCRETE PIPE CE 02.614
- CONCRETE COLLARS FOR JOINING PIPES TOGETHER TO CONFORM WITH SRP'S STANDARD DRAWING CES-30300-003.
- PROPOSED TURNOUT STRUCTURES, INCLUDING PIPE STUBOUTS TO BE INSTALLED BY SRP FORCES.
- PRIOR TO REMOVAL OF EXISTING IRRIGATION STRUCTURE CONTACT SOUTHSIDE WATER SERVICES AT 236-2780 AT LEAST 72 HOURS IN ADVANCE FOR SALVAGING HARDWARE.
- EXISTING SRP IRRIGATION FACILITIES NOT REMOVED AS PART OF NEW IRRIGATION FACILITY CONSTRUCTION WITHIN APPROXIMATE LIMITS IDENTIFIED ON THIS PLAN, ARE TO BE REMOVED BY THE CUSTOMER'S CONTRACTOR.
- (18") 24" RGRCP
- (14") 24" RGRCP
- TIE TO EXISTING WITH 30" HANDPLASTER PER SRP SPECS FOR DITCH MIX.
- DESIGN AND CONSTRUCTION OF NEW PRIVATE IRRIGATION FACILITIES BY CUSTOMER.
- TIE TO EXISTING WITH 23" HANDPLASTER PER SRP SPECS FOR DITCH MIX.
- TEMPORARY BYPASS DIRT-GRADED DITCH. MIN. 1.5' BOTTOM WITH 1.25' 1 SS.
- TEMPORARY CONSTRUCTION EASEMENT.
- STA 0+12± 60.33' PIPE OFFSET. IF STORM DRAIN PIPE & MANHOLE NOT INSTALLED, TIE TO EXISTING WITH 10" HANDPLASTER PER SRP SPECS FOR DITCH MIX.
- REMOVE AND DO NOT REPLACE TREES & FENCING AS REQUIRED FOR CONSTRUCTION.
- NEW 24" STORM DRAIN. MCDOT TO INSTALL 18" RGRCP DRAIN NEAR R/W OF SE COR OF INTERSECTION & PLUG END.



FOR REFERENCE ONLY

ELEVATION EQUATION:
ELEV. THIS DWG
PLUS 0.10' EQUALS
PLANS FOR MCDOT
PROJECT NO. 68237

LOCATION PLAN
9E
10E
2N
3N
43RD AVE
BROADWAY RD
SOUTHERN AVE
57TH AVE

BM. 1
STA 0+46 TOP C X-WALK
OVER T.O. TO N. EL 1025.73
BK W-371 P.2

ISSUED FOR CONSTRUCTION

4	RD-51048	11/93	ARBAJ	g	BP
REV NO.	JOB NO.	DATE	DSGN ENGR	DFTR/CHKR	ENGR SUPV/ISSUE CHK APPD AUTH

SALT RIVER PROJECT
WATER ENGINEERING PHOENIX, ARIZONA

LAT 50.0 WESTERN CANAL
SEC 27 TIN R2E
16/3 COR TO 16/11 COR

SH. NO. 2

SCALE: 1"=30' PROFILE HOR: 1"=30' VERT: 1"=4' P02(120,117)A952311.DGN
SUBJ CODE DISTR CODE DWG SIZE
PP Y-2C 22X34 A-95-231.1
BASE MAP: P02(120,117)RD651048.DGN

BROADWAY ROAD
43RD AVE TO 35TH AVE
MARICOPA COUNTY

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	40	44	

MASS DIAGRAM (FOR INFORMATION ONLY)

EARTHWORK QUANTITIES

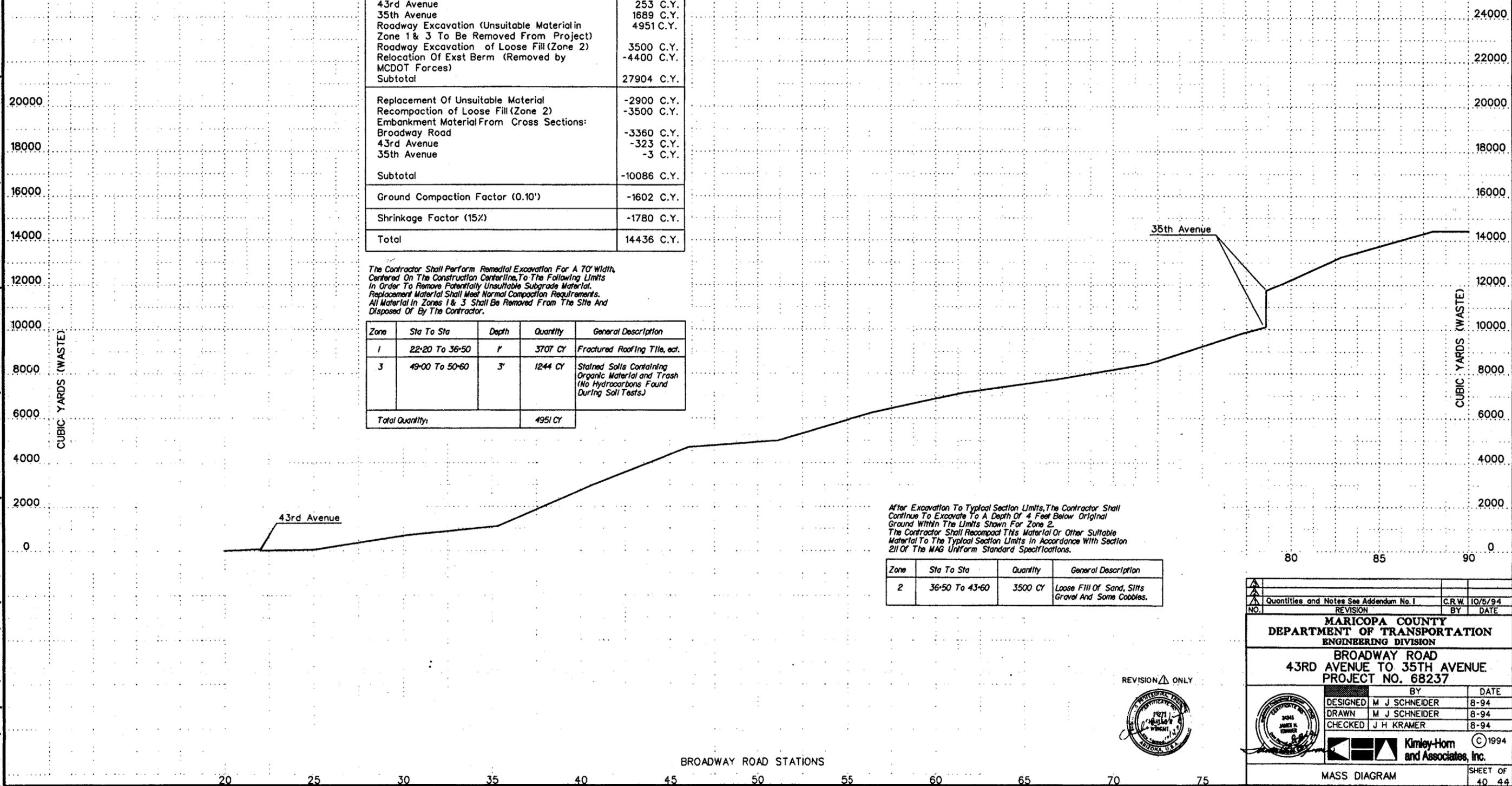
Unclassified Excavation From Cross Sections Broadway Road 43rd Avenue 35th Avenue Roadway Excavation (Unsuitable Material in Zone 1 & 3 To Be Removed From Project) Roadway Excavation of Loose Fill (Zone 2) Relocation Of Exst Berm (Removed by MCDOT Forces) Subtotal	21911 C.Y. 253 C.Y. 1689 C.Y. 4951 C.Y. 3500 C.Y. -4400 C.Y. 27904 C.Y.
Replacement Of Unsuitable Material Recompaction of Loose Fill (Zone 2) Embankment Material From Cross Sections: Broadway Road 43rd Avenue 35th Avenue Subtotal	-2900 C.Y. -3500 C.Y. -3360 C.Y. -323 C.Y. -3 C.Y. -10086 C.Y.
Ground Compaction Factor (0.10')	-1602 C.Y.
Shrinkage Factor (15%)	-1780 C.Y.
Total	14436 C.Y.

The Contractor Shall Perform Remedial Excavation For A 70' Width Centered On The Construction Centerline To The Following Limits In Order To Remove Potentially Unsuitable Subgrade Material. Replacement Material Shall Meet Normal Compaction Requirements. All Material In Zones 1 & 3 Shall Be Removed From The Site And Disposed Of By The Contractor.

Zone	Sta To Sta	Depth	Quantity	General Description
1	22+20 To 36+50	1'	3707 CY	Fractured Roofing Tile, ect.
3	49+00 To 50+60	3'	1244 CY	Stained Soils Containing Organic Material and Trash (No Hydrocarbons Found During Soil Tests)
Total Quantity:			4951 CY	

After Excavation To Typical Section Limits, The Contractor Shall Continue To Excavate To A Depth Of 4 Feet Below Original Ground Within The Limits Shown For Zone 2. The Contractor Shall Recompact This Material Or Other Suitable Material To The Typical Section Limits In Accordance With Section 211 Of The MAG Uniform Standard Specifications.

Zone	Sta To Sta	Quantity	General Description
2	36+50 To 43+60	3500 CY	Loose Fill Of Sand, Silts Gravel And Some Cobbles.



REVISION Δ ONLY



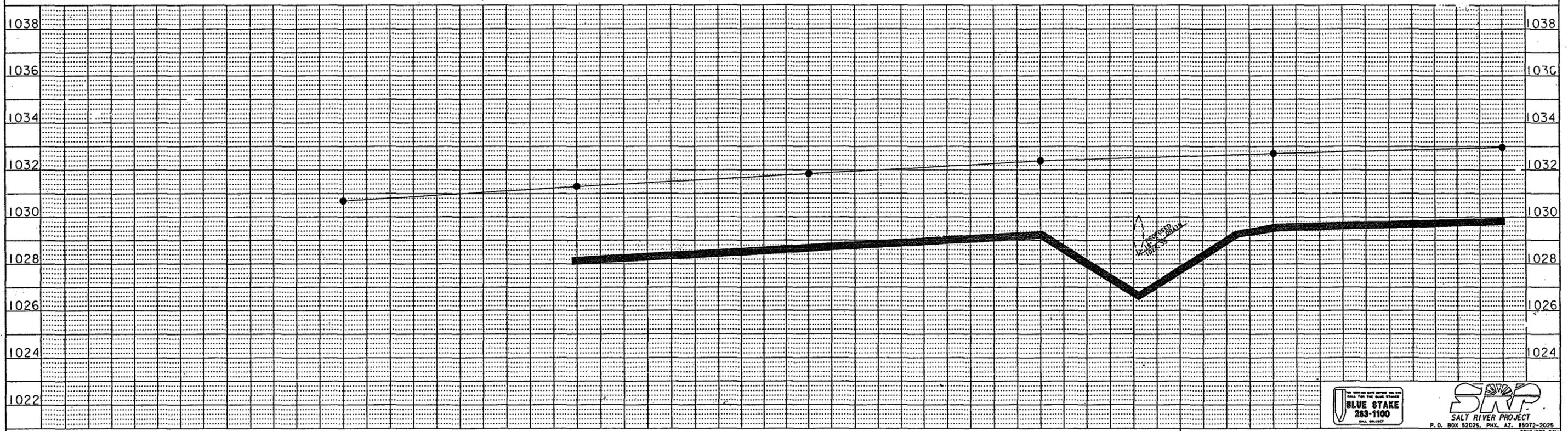
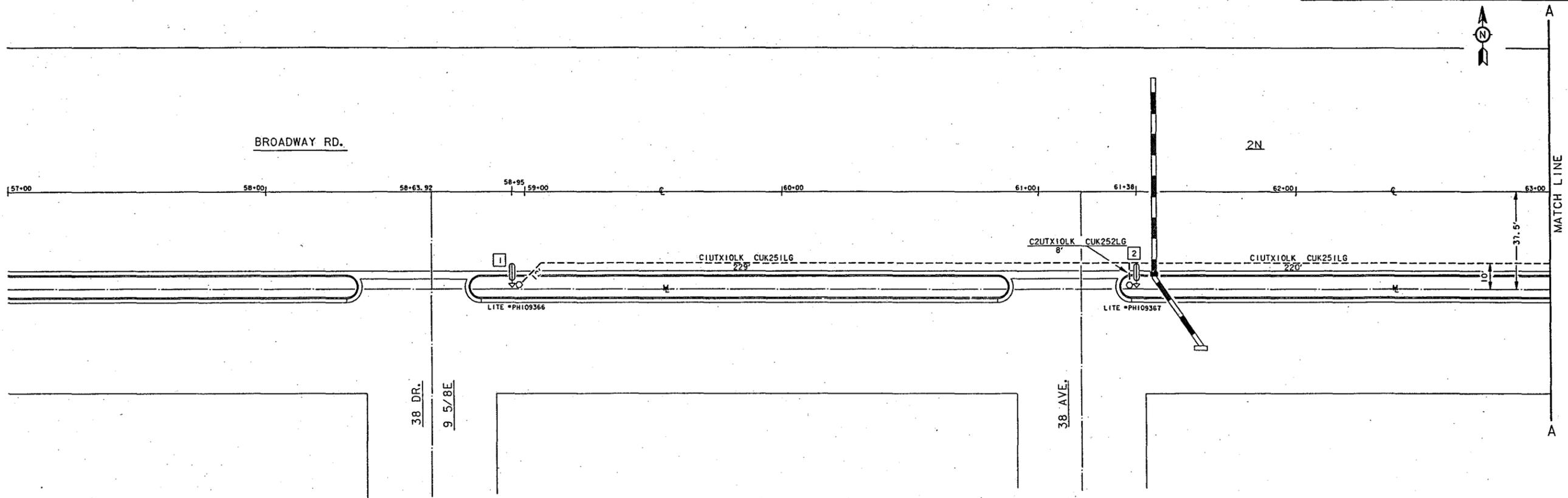
MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION ENGINEERING DIVISION		REVISION	BY	DATE
BROADWAY ROAD 43RD AVENUE TO 35TH AVENUE PROJECT NO. 68237		NO.		
DESIGNED	M J SCHNEIDER	8-94		
DRAWN	M J SCHNEIDER	8-94		
CHECKED	J H KRAMER	8-94		
Kinley-Horn and Associates, Inc.				DATE
MASS DIAGRAM				SHEET OF
				40 44

BDM:WCS:adg
8/22/94

BROADWAY ROAD STATIONS

TRACS NO.

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	42	44	



NOTE: Refer to Sht 1 for Graphic Symbols used on this job.

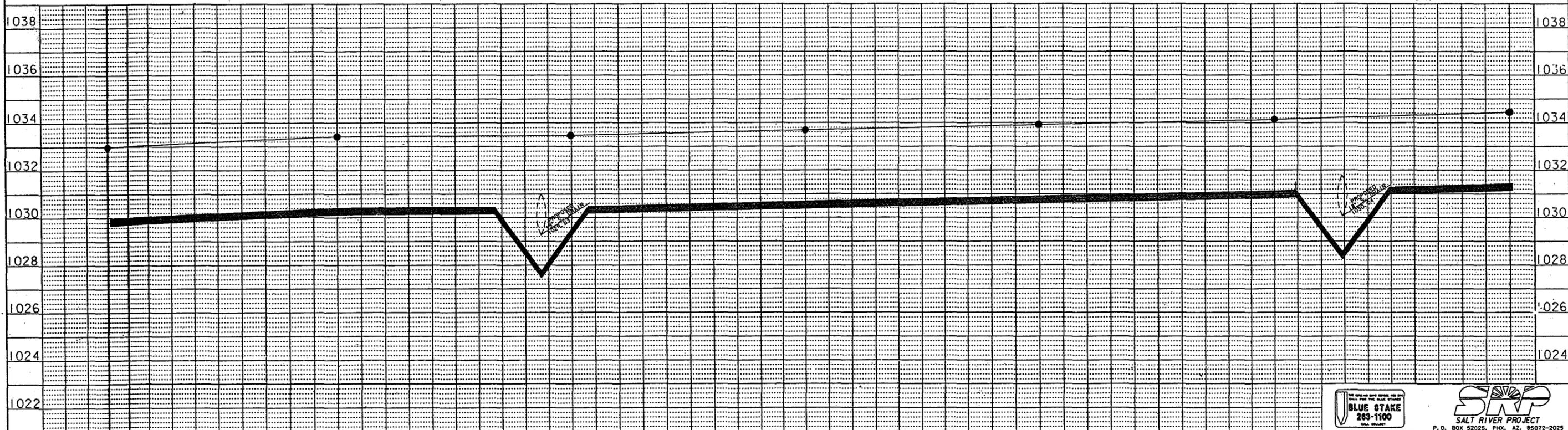
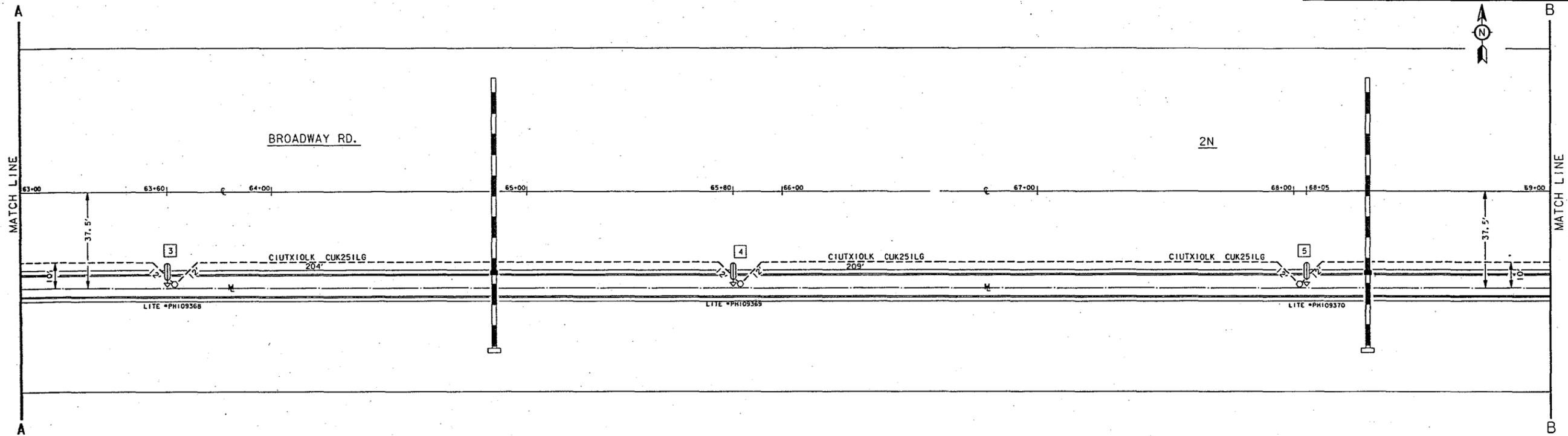
SALT RIVER PROJECT ORID SKETCH WORK AUTHORIZATION

JO NO. KJ7-194 ACTION CODE XF DATE PREPARED 07-08-94 S.R.P. SURVEY TO LOC. 9 7/8 E 2N STATE AZ. REG. NO. 19336

ORIG. NAME DEE STRUBHAR NO. 85488 COMP. NAME BROADWAY ST LITES TELCO DIST. 400 PHONE NO. 236-4849 PRIORITY 1/4 SE & 22 1/2 R 2E APPROVED

40/ACRE AB-22-12 CODE W-1 SHEET 2 OF 4

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	43	44	



BLUE STAKE
263-1100



NOTE: Refer to Sht 1 for Graphic Symbols used on this Job.

SALT RIVER PROJECT GRID SKETCH WORK AUTHORIZATION

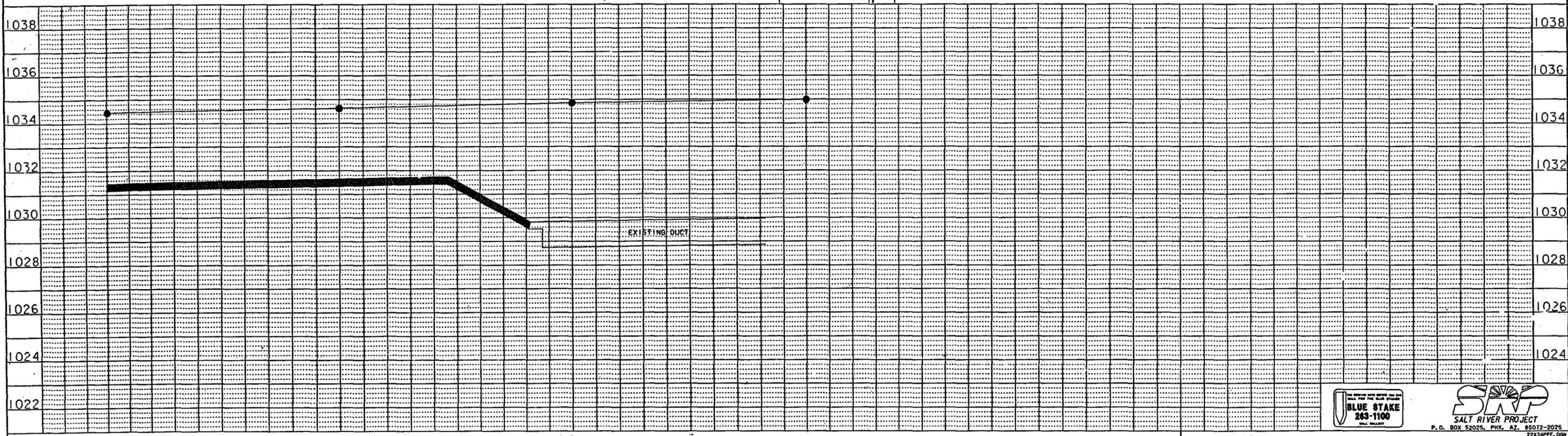
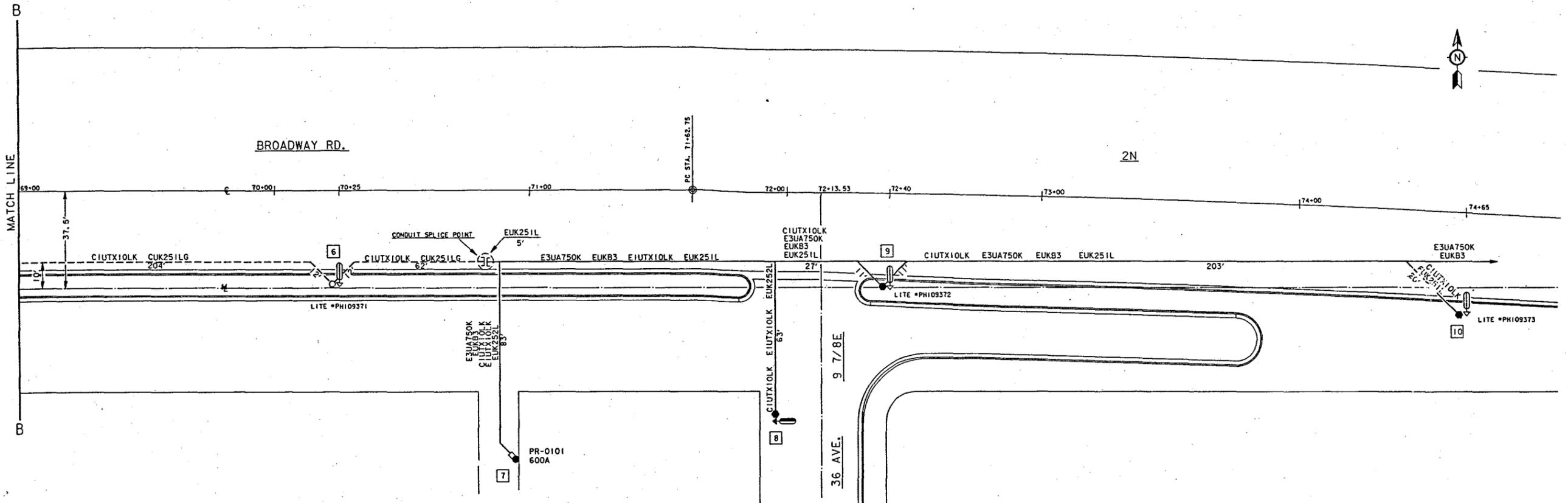
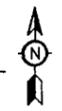
JO NO. KJ7-194 ACTION CODE XF DATE PREPARED 07-08-24 S.A.P. SURVEY TO LOCATE STAKE REG. NO. 79336

ORIG. NAME DEE STRUBHAR NO. 85488 JOE MAP BROADWAY ST LITES TELECO. CABLE JOINT USE MARK

DIST. 400 PHONE NO. 236-4849 COMPL. PRIORITY 1/4 SE & 22' IN R 2E

40/ACRE AB-22-12 CODE W-1 SHEET 3 OF 4

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ.	68237	44	44	



NOTE: Refer to Sht 1 for Graphic Symbols used on this job.

SALT RIVER PROJECT GRID SKETCH WORK AUTHORIZATION

JO NO. KJ7-194 ACTION CODE XF DATE PREPARED 07-08-94 S.R.P. SURVEY TO LOCATE STAKE REL. NO. 79336

GRID NAME DEE STRUBHAR NO. 85488 MAP NAME BROADWAY ST LITES JOINT USE 4000

DIST. 400 PRIORITY 236-4849 MAP SCALE SE & 22' IN R 2E APPROVED

JO NO. KJ7-194 40' ACRE AB-22-12 CODE W-1 SHEET 4 OF 4

