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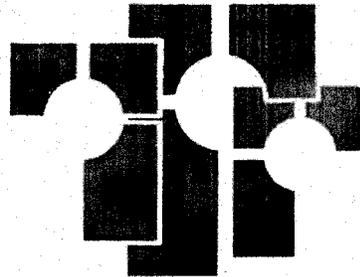
C-8409  
03/26/2013

# PROJECT SPECIFICATIONS AND CONTRACT DOCUMENTS

PROJECT NO. 121312

2012/2013 SLURRY SEAL PROGRAM

FEBRUARY, 2013



GLENDALE



CITY OF GLENDALE

EXPIRES 3/31/13

ENGINEERING DEPARTMENT  
5850 W. Glendale Avenue, Glendale, Arizona 85301 (623) 930-3630



Engineering Department

# Memorandum

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DATE: February 5, 2013  
TO: All Plan and Specification Holders  
FROM: Engineering  
SUBJECT: PROJECT NO. - 121312 2012/2013 SLURRY SEAL PROGRAM

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## ADDENDUM NO. 1

In accordance with the contract documents "Information for Bidders," Page 4, Paragraph 12 CHANGES TO PLANS AND DOCUMENTS, the following revisions to the plans and specifications shall become a part of the contract documents and the bidder shall acknowledge receipt thereof as directed in Paragraph 13 of the Information for Bidders.

**THE BID DATE FOR THIS PROJECT HAS BEEN CHANGED TO FEBRUARY 19, 2013, AT 2:00PM.**

**END OF ADDENDUM**



## Engineering Department

# Memorandum

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DATE: February 8, 2013  
TO: All Plan and Specification Holders  
FROM: Engineering  
SUBJECT: PROJECT NO. 121312 – 2012/2013 SLURRY SEAL PROGRAM

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### ADDENDUM NO. 2

In accordance with the contract documents "Information for Bidders," Page 4, Paragraph 12 CHANGES TO PLANS AND DOCUMENTS, the following revisions to the plans and specifications shall become a part of the contract documents and the bidder shall acknowledge receipt thereof as directed in Paragraph 13 of the Information for Bidders.

*Please see the following clarifications/revisions:*

1. Page 38, Para.7. Traffic Regulations: ADD the following sentences to Item 7.1.4: Full street closures will not be allowed without specific permission from the Transportation Director. In order to facilitate public convenience, only half street closures will be allowed at any given time. Reasonable access to residents within affected subdivisions must be maintained at all times.
2. Page 44, Project Sign: REMOVE the current CONSTRUCTION SIGN DETAIL and REPLACE with the following: The contractor is to provide a minimum of two (2) portable signs at each work location, minimum size 48" x 30" with the following information – City of Glendale 2012/2013 Slurry Seal Program, Project Hotline 000-000-0000 (phone number to be provided).
3. Page 45, SUPPLEMENTAL SPECIFICATIONS – ASPHALT REMOVE/REPLACE. ADD the following sentence to Item 1. Description: All street pavement replacement depth shall be minimum three inches (3"), or match existing thickness, whichever is greater.
4. Page 49, Section 6. Cleaning and Preparing Cracks or Joints. REMOVE the following sentences: Routing cracks and joints will extend crack sealant life and performance. Most cracks in Maricopa County have less than 1/8" movement over the course of a year. On the cracks that have spacing which creates more than 1/8" movement it is recommended that the cracks be routed.
5. Page 49, Section 6. Cleaning and Preparing Cracks or Joints. DELETE ENTIRELY Para. 6.1 Routing
6. Page 51, Section II. CONSTRUCTION SPECIFICATIONS *SLURRY SEAL TYPE I AND TYPE II*. ADD the following sentence to Item 1. Description: A minimum time of three (3) days is required between application of Type III slurry and Type II slurry in areas identified to receive double slurry.

7. Page 57, Section 6. Mixing and Spreading Equipment. DELETE the paragraph titled Calibration. REPLACE with the following: Calibration: Each slurry mixing unit to be used in performance of the work shall be calibrated. Previous calibration documentation covering the exact materials to be used will be accepted as long as the submitted calibration has occurred within the previous twelve (12) months from the date of this addendum.

8. Page 58, Section 8. Placing, Para. 2. Polymer modified slurry seal shall be spread at a rate within the following ranges of pound of dry aggregate per square yard. In the table within this paragraph, CHANGE the Spread Rate (lbs/yd<sup>2</sup>) for Type II from 12 – 18 lbs/yd<sup>2</sup> to 18 lbs/yd<sup>2</sup> minimum. CHANGE the Spread Rate (lbs/yd<sup>2</sup>) for Type III from 18 – 25 lbs/yd<sup>2</sup> to 20 lbs/yd<sup>2</sup> minimum.

9. Page 60, Item 4. DELETE this paragraph entirely and REPLACE with the following: The contractor will be required to coordinate with the City's Public Relations Consultant for notifying residents and businesses of any street restriction that will affect access to their property. The contractor will provide scheduling information and schedule updates to the Public Relations Consultant in such a timely manner as to allow a minimum of 48 hours advance notice of construction activity and street restrictions. For Monday work, residents and businesses shall be notified the preceding Thursday. For Tuesday work, residents and businesses shall be notified the preceding Friday. Re-notification shall be a minimum of 24 hours in advance.

10. Page 60, Item 6. REMOVE the sentence: All street (full width and gutters) shall be swept by PM-10 efficient type self-propelled pick up sweeper no sooner than 24 hours after polymer modified slurry seal placement is complete. ADD the sentence: The Contractor shall sweep, with PM-10 efficient type self-propelled pick up sweeper, all areas surfaced no earlier than five (5) days and no later than ten (10) days after completion of surfacing operations

11. Page 60, Section 13. Clean Up. REMOVE the sentence: The Contractor shall sweep, with PM-10 efficient type self-propelled pick up sweeper, all areas surfaced not less than 24 hours after application. ADD the sentence: The Contractor shall sweep, with PM-10 efficient type self-propelled pick up sweeper, all areas surfaced no earlier than five (5) days and no later than ten (10) days after completion of surfacing operations.

12. Page 57, SPECIAL PROVISIONS, 1. SCOPE OF WORK: ADD the following scope of work: Northern Avenue from the railroad spur crossing (approx. 65<sup>th</sup> Avenue alignment) west to the curb returns at the east side of the 67<sup>th</sup> Avenue/Grand Avenue intersection is to receive crack seal application and full width Micro-surfacing (Microseal). A Microseal (Type III) Bid Item (7,294 SY) has been added to the Bid Summary. The Bid Item titled Crack Seal has been increased by 9,390 LF to include the crack seal application on Northern Avenue. All City and private utility facilities located within the roadway prism must be adjusted to grade as a result of Microseal operations/applications. Adjustments shall be made as outlined on the Bid Tab and in the special provisions. As the work on Northern Avenue is adjacent to Grand Avenue, the city of Glendale must procure an ADOT Highway Encroachment Permit before this work can proceed. The Contractor is expected to schedule this work near the end of the project schedule as the ADOT Encroachment Permit may take 6 – 8 weeks to obtain.

The following attachments are included in Addendum No. 2:

- Revised Bid Summary
- Revised Crack Seal Index that includes Northern Avenue
- Supplemental Specifications – Microseal
- Microseal Index

**THIS ADDENDUM CONSISTS OF 31 PAGES INCLUDING THE COVER PAGE**

## BID ITEM SUMMARY

Base Bid

Revised 2/6/13 (Addendum #2)

BID ITEM #	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL BID
1	Mobilization / Demobilization	1	LS		
2	Construction Material Sampling & Testing	1	LS		
3	Asphalt Repair (Remove/Replace), 12.5mm – Min. 3" Depth All Locations	2,392	SY		
4	Adjust Existing Valve Box & Cover, MAG Std. Det. 391-1, Type A	2	EA		
5	Adjust Existing Manhole Frame & Cover, MAG Std. Det. 422	5	EA		
6	Adjust Existing SWG Valve Box & Cover	6	EA		
7	Crack Seal	904,244	LF		
8	Single Slurry Seal	378,028	SY		
9	Double Slurry Seal	31,844	SY		
10	Microseal (Type III)	7,294	SY		
11	Traffic Control	1	LS		
12	Uniformed, Off-duty Law Enforcement Officer	200	HR		
13	Allowance for Construction Contingencies	1	LS	\$68,000.00	\$68,000.00
<b>TOTAL CONSTRUCTION BID:</b>					

CRACK SEAL INDEX

Treatment	Road Name	Road From	Road To	Road Length	Crack Seal (LF)	Exhibit No.
CRACK SEAL	N 50TH AVE	W CHOLLA ST	W SUNNYSIDE DR	1,320	6,801	26, 18
CRACK SEAL	N 51ST DR	W CORTEZ ST	W SIERRA ST	250	2,992	25, 17
CRACK SEAL	N 52ND AVE	W ALTADENA AVE	W SUNNYSIDE DR	270	3,231	17
CRACK SEAL	N 52ND AVE	W CHOLLA ST	W LUPINE AVE	270	3,231	25
CRACK SEAL	N 52ND AVE	W LUPINE AVE	W CORTEZ ST	250	2,992	25
CRACK SEAL	N 52ND AVE	W POINSETTIA DR	END OF PAVEMENT	150	1,795	17
CRACK SEAL	N 52ND AVE	W SIERRA ST	W ALTADENA AVE	270	3,231	17
CRACK SEAL	N 52ND AVE	W SUNNYSIDE DR	W POINSETTIA DR	260	3,112	17
CRACK SEAL	N 52ND DR	W POINSETTIA DR	W RIVERA DR	250	2,992	16
CRACK SEAL	N 53RD AVE	W ALTADENA AVE	W SUNNYSIDE DR	265	3,964	16
CRACK SEAL	N 53RD AVE	W CHOLLA ST	W LUPINE AVE	290	4,338	24
CRACK SEAL	N 53RD AVE	W CORTEZ ST	W SIERRA ST	250	3,740	24, 16
CRACK SEAL	N 53RD AVE	W LUPINE AVE	W CORTEZ ST	250	3,740	24
CRACK SEAL	N 53RD AVE	W POINSETTIA DR	W RIVERA DR	255	3,815	16
CRACK SEAL	N 53RD AVE	W RIVERA DR	W CACTUS RD	800	11,968	16, 15
CRACK SEAL	N 53RD AVE	W SIERRA ST	W ALTADENA AVE	265	3,964	16
CRACK SEAL	N 53RD AVE	W SUNNYSIDE DR	W POINSETTIA DR	255	3,815	16
CRACK SEAL	N 55TH DR	W MESCAL ST	W SHANGRILA RD	257	2,813	32
CRACK SEAL	N 55TH DR	W YUCCA ST	W GARDEN DR	257	2,813	23
CRACK SEAL	N 56TH DR	W MESCAL ST	W SHANGRILA RD	257	2,813	31
CRACK SEAL	N 56TH DR	W YUCCA ST	W GARDEN DR	257	2,813	22
CRACK SEAL	N 57TH AVE	W DESERT COVE AVE	W MESCAL ST	266	3,639	31
CRACK SEAL	N 57TH AVE	W MESCAL ST	W YUCCA ST	518	7,086	31, 22
CRACK SEAL	N 57TH AVE	W YUCCA ST	W CHOLLA ST	532	7,278	22
CRACK SEAL	N 59TH DR	W DESERT COVE AVE	W SHANGRILA RD	425	4,243	30
CRACK SEAL	N 59TH DR	W SHANGRILA RD	W YUCCA ST	315	3,145	21
CRACK SEAL	N 59TH DR	W YUCCA ST	W GARDEN DR	270	2,696	21
CRACK SEAL	N 59TH LN	W DESERT COVE AVE	END OF PAVEMENT	240	2,396	30
CRACK SEAL	N 60TH AVE	N 61ST AVE	W MERCER LN	665	6,017	30
CRACK SEAL	N 60TH AVE	W DESERT COVE AVE	W DESERT COVE AVE	300	2,995	30
CRACK SEAL	N 60TH AVE	W DESERT COVE AVE	W MESCAL ST	220	2,196	30
CRACK SEAL	N 60TH AVE	W MERCER LN	W DESERT COVE AVE	245	3,669	30
CRACK SEAL	N 60TH AVE	W MESCAL ST	W GARDEN DR	770	7,688	30, 21
CRACK SEAL	N 60TH AVE	W PEORIA AVE	N 61ST AVE	725	6,224	34, 35, 30
CRACK SEAL	N 60TH DR	END OF PAVEMENT	W DESERT COVE AVE	235	2,346	29
CRACK SEAL	N 60TH DR	W DESERT COVE AVE	W MESCAL ST	255	2,546	29
CRACK SEAL	N 60TH DR	W MESCAL ST	W SHANGRILA RD	245	2,446	29, 20
CRACK SEAL	N 60TH DR	W SHANGRILA RD	N 60TH CT	680	6,789	20, 21
CRACK SEAL	N 61ST AVE	N 60TH AVE	W CHOLLA ST	2,195	27,394	30, 29, 20
CRACK SEAL	N 65TH AVE	W BECKER LN	W CHRISTY DR	560	8,333	33
CRACK SEAL	N 65TH AVE	W CHRISTY DR	W MERCER LN	250	3,720	28
CRACK SEAL	N 65TH AVE	W DESERT COVE AVE	W MESCAL ST	345	5,134	28
CRACK SEAL	N 65TH AVE	W MERCER LN	W DESERT COVE AVE	345	5,134	28

CRACK SEAL INDEX

Treatment	Road Name	Road From	Road To	Road Length	Crack Seal (LF)	Exhibit No.
CRACK SEAL	N 65TH AVE	W MESCAL ST	W CHOLLA ST	980	14,582	28, 19
CRACK SEAL	N 65TH AVE	W PEORIA AVE	W BECKER LN	180	2,678	33
CRACK SEAL	N 66TH AVE	W BECKEN LN	W SAGUARO DR	270	3,214	33
CRACK SEAL	N 66TH AVE	W PEORIA AVE	W BECKER LN	190	2,262	33
CRACK SEAL	N 66TH AVE	W SAGUARO DR	W CHRISTY DR	275	3,274	33, 28
CRACK SEAL	N 66TH DR	W CHRISTY DR	W MERCER LN	250	2,976	28
CRACK SEAL	N 66TH DR	W DESERT COVE AVE	W MESCAL ST	340	4,047	28
CRACK SEAL	N 66TH DR	W MERCER LN	W DESERT COVE AVE	260	3,095	28
CRACK SEAL	N 68TH AVE	W FRIER DR	W NORTHERN AVE	1,320	21,648	44, 41
CRACK SEAL	N 69TH AVE	PRIVATE DR	W BELMONT AVE	282	2,312	43
CRACK SEAL	N 69TH AVE	W BELMONT AVE	W FRIER DR	495	4,059	43
CRACK SEAL	N 69TH AVE	W ORANGEWOOD AVE	PRIVATE DR	542	4,444	45, 43
CRACK SEAL	N 69TH DR	W MARY JANE LN	W CAROL ANN WAY	252	2,141	5
CRACK SEAL	N 69TH DR	W ZOE ELLA WAY	W KAREN LEE LN	252	2,141	5
CRACK SEAL	N 70TH AVE	N 70TH AVE	W NORTHERN AVE	585	9,594	40
CRACK SEAL	N 70TH AVE	W AUGUSTA AVE	N 70TH AVE	178	2,919	40
CRACK SEAL	N 70TH AVE	W CAROL ANN WAY	W NANCY RD	257	2,183	5, 3
CRACK SEAL	N 70TH AVE	W FRIER DR	W AUGUSTA AVE	695	11,398	43, 40
CRACK SEAL	N 70TH AVE	W GREENWAY RD	W ZOE ELLA WAY	227	1,929	5
CRACK SEAL	N 77TH AVE	W MONTEBELLO AVE	W SOLANO DR S	255	4,366	50
CRACK SEAL	N 77TH AVE	W PALO VERDE DR	W BETHANY HOME ROAD	190	3,253	50
CRACK SEAL	N 77TH AVE	W RANCHO DR	W PALO VERDE DR	545	9,330	50
CRACK SEAL	N 77TH AVE	W SAN MIGUEL AVE	W MONTEBELLO AVE	261	4,468	52, 50
CRACK SEAL	N 77TH DR	W RANCHO DR S	W RANCHO DR	230	3,938	50
CRACK SEAL	N 78TH AVE	W PALO VERDE DR	END OF PAVEMENT	206	2,821	50
CRACK SEAL	N 78TH DR	END OF PAVEMENT	W SOLANO DR N	254	3,479	50
CRACK SEAL	N 78TH DR	N 78TH DR	W SAN JUAN AVE	113	1,548	52
CRACK SEAL	N 78TH DR	W SAN JUAN AVE	N 78TH DR	335	4,588	52
CRACK SEAL	N 78TH DR	W SAN JUAN AVE	W SAN MIGUEL AVE	312	4,273	52
CRACK SEAL	N 78TH DR	W SAN JUAN AVE	W SAN MIGUEL AVE	271	3,712	52
CRACK SEAL	N 78TH DR	W SOLANO DR N	W PALO VERDE DR	295	4,081	50
CRACK SEAL	N 79TH AVE	W MONTEBELLO AVE	W SOLANO DR S	255	3,492	51, 49
CRACK SEAL	N 79TH AVE	W RANCHO DR	W RANCHO DR	125	1,712	49
CRACK SEAL	N 79TH AVE	W RANCHO DR	W SOLANO DR N	161	2,205	49
CRACK SEAL	N 79TH AVE	W SAN MIGUEL AVE	W MONTEBELLO AVE	275	3,766	51
CRACK SEAL	N 79TH AVE	W SOLANO DR N	W BETHANY HOME RD	515	7,053	49
CRACK SEAL	N 79TH AVE	W SOLANO DR S	W RANCHO DR	270	3,698	49
CRACK SEAL	N 79TH DR	W Ocotillo RD	END OF PAVEMENT	485	9,405	48, 47
CRACK SEAL	N 80TH AVE	W LAMAR RD	W GLENDALE AVE	680	10,714	47
CRACK SEAL	N 80TH AVE	W Ocotillo RD	W LAMAR RD	638	10,052	48, 47
CRACK SEAL	N 85TH DR	W WINDSOR BLVD	W MEDLOCK DR	250	2,736	55
CRACK SEAL	N 87TH AVE	W CAMELBACK RD	W PASADENA AVE	406	4,443	55
CRACK SEAL	N 87TH AVE	W PASADENA AVE	W WINDSOR BLVD	310	3,393	55

CRACK SEAL INDEX

Treatment	Road Name	Road From	Road To	Road Length	Crack Seal (LF)	Exhibit No.
CRACK SEAL	N 87TH AVE	W WINDSOR BLVD	W MEDLOCK DR	301	3,294	55
CRACK SEAL	W ALTADENA AVE	N 53RD AVE	N 52ND AVE	780	9,335	16, 17
CRACK SEAL	W AUGUSTA AVE	N 71ST AVE	N 70TH AVE	619	10,152	39, 40
CRACK SEAL	W BECKER LN	N 66TH AVE	N 65TH AVE	430	5,119	33
CRACK SEAL	W BELMONT AVE	N 69TH AVE	N 67TH AVE	1,325	21,730	43, 44
CRACK SEAL	W CAROL ANN WAY	N 70TH AVE	N 69TH DR	396	3,364	5
CRACK SEAL	W CAROL ANN WAY	N 71ST AVE	N 70TH AVE	679	5,769	5
CRACK SEAL	W CHRISTY DR	N 66TH AVE	N 65TH AVE	480	5,714	28
CRACK SEAL	W CHRISTY DR	N 66TH DR	N 66TH AVE	535	6,369	28
CRACK SEAL	W CHRISTY DR	N 67TH AVE	N 66TH DR	190	2,262	27, 28
CRACK SEAL	W CORTIEZ ST	N 52ND AVE	N 51ST DR	250	2,992	25
CRACK SEAL	W CORTIEZ ST	N 53RD AVE	N 52ND AVE	900	10,771	24, 25
CRACK SEAL	W DESERT COVE AVE	N 57TH AVE	N 55TH AVE	885	12,107	32
CRACK SEAL	W DESERT COVE AVE	N 57TH AVE	N 57TH AVE	432	5,910	31
CRACK SEAL	W DESERT COVE AVE	N 57TH DR	N 57TH AVE	268	2,750	31
CRACK SEAL	W DESERT COVE AVE	N 58TH DR	N 5TH DR	860	8,824	30, 31
CRACK SEAL	W DESERT COVE AVE	N 59TH AVE	N 58TH DR	190	1,949	30
CRACK SEAL	W DESERT COVE AVE	N 59TH LN	N 59TH DR	135	1,348	30
CRACK SEAL	W DESERT COVE AVE	N 60TH AVE	N 59TH LN	245	2,446	30
CRACK SEAL	W DESERT COVE AVE	N 60TH DR	N 60TH AVE	495	4,942	29, 30
CRACK SEAL	W DESERT COVE AVE	N 66TH DR	N 65TH AVE	1,015	15,103	28
CRACK SEAL	W DESERT COVE AVE	N 67TH AVE	N 66TH DR	190	2,827	27, 28
CRACK SEAL	W FRIER DR	N 68TH AVE	N 67TH AVE	445	7,298	44
CRACK SEAL	W FRIER DR	N 69TH AVE	N 68TH AVE	880	14,432	43, 44
CRACK SEAL	W FRIER DR	N 70TH AVE	N 69TH AVE	459	3,764	43
CRACK SEAL	W FRIER DR	N 71ST AVE	W FRIER DR	712	11,677	42, 43
CRACK SEAL	W FRIER DR	W FRIER DR	N 70TH AVE	175	2,870	43
CRACK SEAL	W GARDEN DR	N 55TH DR	N 55TH AVE	280	3,064	23
CRACK SEAL	W GARDEN DR	N 56TH DR	N 55TH DR	772	8,449	22, 23
CRACK SEAL	W GARDEN DR	N 60TH DR	N 59TH DR	470	4,692	21
CRACK SEAL	W GARDEN DR	N 60TH AVE	N 60TH AVE	275	2,746	21
CRACK SEAL	W KAREN LEE LN	N 60TH CT	N 69TH AVE	257	2,183	5, 6
CRACK SEAL	W KAREN LEE LN	W GREENWAY RD	N 69TH DR	917	7,791	5
CRACK SEAL	W LUPINE AVE	N 52ND AVE	END OF PAVEMENT	325	3,890	25
CRACK SEAL	W LUPINE AVE	N 53RD AVE	N 52ND AVE	900	10,771	24, 25
CRACK SEAL	W MARY JANE LN	N 69TH DR	N 69TH AVE	257	2,183	5, 6
CRACK SEAL	W MARY JANE LN	N 71ST AVE	N 69TH DR	1,191	10,119	5

CRACK SEAL INDEX

Treatment	Road Name	Road From	Road To	Road Length	Crack Seal (Lf)	Exhibit No.
CRACK SEAL	W MERCER LN	N 59TH AVE	N 60TH AVE	325	4,563	30
CRACK SEAL	W MERCER LN	N 66TH DR	N 65TH AVE	1,010	12,023	28
CRACK SEAL	W MESSICAL ST	N 56TH DR	N 55TH DR	772	8,449	31, 32
CRACK SEAL	W MESSICAL ST	N 57TH AVE	N 56TH DR	268	2,933	31
CRACK SEAL	W MESSICAL ST	N 60TH DR	N 60TH AVE	465	4,643	29, 30
CRACK SEAL	W MESSICAL ST	N 66TH DR	N 65TH AVE	1,010	12,023	28
CRACK SEAL	W MONTEBELLO AVE	N 79TH AVE	N 77TH AVE	1,200	20,544	51, 52, 50
CRACK SEAL	W NORTHERN AVE	W GRAND AVE	RR TRACKS (WEST SIDE)	1,010	9,390	ADDENDUM #2
CRACK SEAL	W OREGON AVE	END OF PAVEMENT	N 83RD AVE	660	5,869	53, 54
CRACK SEAL	W PALO VERDE DR	END OF PAVEMENT	N 77TH AVE	290	3,972	50
CRACK SEAL	W PALO VERDE DR	N 78TH DR	N 78TH AVE	537	7,355	50
CRACK SEAL	W POINSETTIA DR	N 52ND DR	N 52ND AVE	315	3,770	16, 17
CRACK SEAL	W RANCHO DR	N 53RD AVE	N 52ND DR	420	5,027	16
CRACK SEAL	W RANCHO DR	N 77TH DR	N 77TH AVE	237	3,246	50
CRACK SEAL	W RANCHO DR	N 79TH AVE	END OF PAVEMENT	165	2,260	49, 50
CRACK SEAL	W RANCHO DR	N 79TH AVE	W SOLANO DR S	419	5,739	49, 50
CRACK SEAL	W RANCHO DR	W RANCHO DR	N 77TH DR	550	7,533	50
CRACK SEAL	W RANCHO DR	W RANCHO DR	W RANCHO DR	159	2,178	50
CRACK SEAL	W RIVIERA DR	N 53RD AVE	N 52ND DR	445	5,326	16
CRACK SEAL	W SAGUARO DR	N 66TH AVE	END OF PAVEMENT	205	2,440	33
CRACK SEAL	W SAN JUAN AVE	N 78TH DR	N 78TH DR	874	11,970	52
CRACK SEAL	W SAN MIGUEL AVE	N 78TH DR	END OF PAVEMENT	384	5,259	52
CRACK SEAL	W SAN MIGUEL AVE	N 79TH AVE	N 78TH DR	136	1,863	51, 52
CRACK SEAL	W SHANGRI LA RD	END OF PAVEMENT	N 59TH DR	245	2,446	21
CRACK SEAL	W SHANGRI LA RD	N 60TH DR	END OF PAVEMENT	240	2,396	20, 21
CRACK SEAL	W SHANGRI LA RD	N 55TH DR	N 55TH AVE	279	3,053	32
CRACK SEAL	W SHANGRI LA RD	N 56TH DR	N 55TH DR	772	8,449	31, 32
CRACK SEAL	W SIERRA ST	N 51ST DR	N 51ST AVE	185	2,214	17
CRACK SEAL	W SIERRA ST	N 52ND AVE	N 51ST DR	375	4,488	17
CRACK SEAL	W SIERRA ST	N 53RD AVE	N 52ND AVE	780	9,335	16, 17
CRACK SEAL	W SOLANO DR N	N 78TH DR	N 78TH AVE	581	7,957	50
CRACK SEAL	W SOLANO DR N	N 79TH AVE	N 78TH DR	175	2,397	49, 50
CRACK SEAL	W SOLANO DR S	W RANCHO DR	N 77TH AVE	852	11,669	50
CRACK SEAL	W SUNNYSIDE DR	N 51ST AVE	N 50TH AVE	670	4,202	17, 18
CRACK SEAL	W SUNNYSIDE DR	N 53RD AVE	N 52ND AVE	780	9,335	16, 17
CRACK SEAL	W WINDSOR BLVD	N 87TH AVE	N 85TH DR	934	10,222	55
CRACK SEAL	W YUCCA ST	END OF PAVEMENT	N 59TH DR	205	2,047	21
CRACK SEAL	W YUCCA ST	N 56TH DR	N 56TH DR	772	8,449	22, 23
CRACK SEAL	W YUCCA ST	N 57TH AVE	N 56TH DR	269	2,944	22
CRACK SEAL	W ZOE ELLA WAY	N 70TH AVE	N 69TH DR	396	3,364	5
CRACK SEAL	W ZOE ELLA WAY	W GREENWAY RD	N 70TH AVE	281	2,387	5
TOTAL						904,244

## SUPPLEMENTAL SPECIFICATIONS – MICROSEAL

### I. GENERAL

The City of Glendale adopted the "Uniform Standard Specification for Public Works Construction", which are sponsored and distributed by the Maricopa Association of Governments. These documents, with revisions, are hereby made a part of these contract documents. Whenever in the Uniform Standards Specification, the words "the contracting agency" is used, the meaning shall be the City of Glendale.

In all cases where ASTM, ASSHTO, AWWA, USAS, Federal, City of Phoenix, MAG Specifications, Maricopa County, Arizona State Highway, or other standard specifications are referred to, unless otherwise stated, revision, supplements or addenda issued on or before the date of this contract, shall prevail.

In the event of any conflict between these project specifications and the requirements of the plans, detail drawing, MAG Standard Details and Specifications, these project specifications shall prevail.

### II. CONSTRUCTION SPECIFICATIONS *MICRO-SURFACING (MICROSEAL)*

#### 1. Description:

The work described herein shall consist of constructing micro-surfacing on an existing asphaltic concrete pavement surface. This specification covers the materials, equipment, and construction procedures for resurfacing and/or rut-filling of existing paved surfaces. The micro-surfacing shall be a mixture of mineral aggregate, polymer modified emulsified asphalt, mineral filler, water, and other additives, properly proportioned, mixed, and spread on the pavement surface in accordance with the specifications, and as directed by the Engineer. *PLEASE NOTE* that the Contractor shall wait to perform any microseal operations/applications until the end of the project. Additionally, the ADOT Encroachment Permit must be approved and provided to the City prior to performing any microseal operations/applications.

The finished product shall be able to accept straight, rolling traffic within one hour after placement without damage; however, stopping and starting traffic, and adverse weather conditions, may require additional curing time.

The contractor shall supply all materials, labor, and equipment necessary to perform the micro-surfacing work as described herein, or as directed by the Engineer. All equipment, tools, and machines used in the performance of this work shall be maintained in satisfactory working condition at all times to ensure a high quality product.

The contractor shall provide a minimum two-hour orientation session for project personnel, covering the construction process, materials control, and materials measurement by true weight delivered versus machine dial readings.

The contractor shall provide to the Engineer, on a daily basis, the quantity of material delivered versus material placed through the micro-surfacing mixer based on dial gauge readings. The Engineer will independently verify all dial gauge readings, and weight of material delivered. This information will be used as a check against the job mix formula proportions.

References are made herein to the following nationally recognized organizations:

- AASHTO American Association of State Highway and Transportation Officials
- ASTM American Society for Testing and Materials
- ISSA International Slurry Surfacing Association

## 2. Materials:

### 2.1 General:

All materials shall be approved by the Engineer prior to the start of construction.

The Engineer reserves the right to sample and test any materials used on the project. All materials that do not meet specifications will be rejected.

The information given in Table 1 shall be used to estimate the quantities of emulsified asphalt and dry mineral aggregate for Type II and Type III micro-surfacing. Exact quantities of emulsified asphalt and dry mineral aggregate shall be determined by job mix formula, or as directed by the Engineer.

<b>Material</b>	<b>Type II Micro-Surfacing</b>	<b>Type III Micro-Surfacing</b>
Emulsified Asphalt, by weight of Dry Mineral Aggregate, percent	14	13
Dry Mineral Aggregate, pounds per square yard	22	30

### 2.2 Emulsified Asphalt:

Polymer modified, cationic, quick setting (mixing grade) emulsified asphalt (PMCQS-Ih) shall be used. A minimum of 4% polymer solids, by total weight of polymer and asphalt residue, shall be added prior to the mill head. The type and amount of polymer solids used shall be certified by the supplier.

The polymer modified emulsified asphalt shall conform to the requirements of Table 2.

<b>TABLE 2</b> <b>Polymer Modified Emulsified Asphalt (PMCQS-1h)</b>		
<b>TESTS ON EMULSION</b>	<b>TEST METHOD</b>	<b>SPECIFICATION LIMITS</b>
Viscosity, Saybolt Furol seconds @ 77°F	AASHTO T-59	20-100
Sieve Test, retained on No. 20, %	AASHTO T-59	0.30 Max
Particle Charge	AASHTO T-59	Positive
Storage Stability Test, 24 hours, %	AASHTO T-59	1.0 Max
Percent Asphalt Residue by Evaporation	Arizona Test Method 512 (1)	60 Min
<b>TESTS ON RESIDUE BY DISTILLATION</b> AASHTO T-59 (350 °F MAX.)	<b>TEST METHOD</b>	<b>SPECIFICATION LIMITS</b>
Kinematic Viscosity @ 275 °F, cst	AASHTO T-201	650 Min
Penetration, 77 °F, 100 g, 5 seconds, 0.1 mm	AASHTO T-49	40-90
Softening Point, °F	AASHTO T-53	140 Min
Ductility, 77°F, 5 cm/minute, cm	AASHTO T-51	60 Min
Elastic Recovery @ 77°F, %	AASHTO T-301 (2)	55 Min
<p>(1) The percent of asphalt residue will be determined in accordance with the requirements of Arizona Test Method 512 when only residue percent is being tested; however, in the case of dispute or when residue testing is required, the percent of asphalt residue by distillation (AASHTO T 59, modified to 350 °F) will be used.</p> <p>(2) Testing shall be performed on residue by distillation, not on residue by oven evaporation</p>		

**2.3 Mineral Aggregate:**

The mineral aggregate used shall be of the type and grade specified for the particular use of the micro-surfacing. Mineral aggregate shall consist of sound and durable crushed gravel or crushed stone. The material shall be free from organic matter and other deleterious materials. Aggregates shall be 100% crushed material with no rounded particles. All aggregate shall be free of caked lumps and oversize particles. No natural sand will be allowed.

The mineral aggregate, prior to the addition of emulsion shall conform to the requirements of this section. If aggregates are blended each component aggregate shall meet the sand equivalency and abrasion resistance and shall be 100% crushed.

The gradation of the mineral aggregate shall be Type II or Type III, however, mineral aggregate meeting the requirements of Type III shall be used for rut-filling. The gradation of the mineral aggregate, when tested in accordance with the requirements of AASHTO T 11 and T 27, shall conform to the requirements of Table 3.

<b>TABLE 3</b>			
<b>SIEVE SIZE</b>	<b>PERCENT PASSING SIEVES</b>		
	<b>MIX DESIGN GRADING LIMITS</b>		<b>PRODUCTION TOLERANCES (See Note Below)</b>
	<b>TYPE II</b>	<b>TYPE III</b>	
3/8 inch	100	100	±7
No. 4	85-100	70-90	±7
No. 8	65-90	45-70	±7
No. 16	45-70	28-50	±7
No. 30	30-50	19-34	±7
No. 50	18-30	12-25	±6
No. 100	10-21	7-18	±5
No. 200	5.0-15.0	5.0-15.0	±4.0

Note: The allowable tolerance during production will be determined by applying the production tolerances to the job mix formula target values. However, the allowable production tolerance shall not fall outside the mix design grading limits in this table.

The mineral aggregate shall conform to the requirements of Table 4 when tested in accordance with the applicable test methods.

<b>TABLE 4</b>		
<b>MINERAL AGGREGATE CHARACTERISTICS</b>		
<b>CHARACTERISTIC</b>	<b>TEST METHOD</b>	<b>REQUIREMENT</b>
Sand Equivalent	AASHTO T 176 (After thoroughly sieving the sample, no additional cleaning of the fines from the plus No. 4 material is required.)	Minimum 60
Carbonates	Arizona Test Method 238	Maximum 20%
Abrasion	AASHTO T 96	500 Rev., Max. 40%
Fractured Coarse Aggregate Particles	Arizona Test Method 212	Minimum 95% (with at least one fractured face)
Un-compacted Void Content	Arizona Test Method 247	Minimum 45.0%

Tests on aggregates outlined in Table 4, other than abrasion, shall be performed on materials furnished for development of job mix formula purposes. Abrasion testing shall be performed separately for each source of mineral aggregate. All sources shall meet the requirements for abrasion. If desired, abrasion testing may be performed utilizing the parent aggregate from each source. Historical abrasion values may be supplied on sources provided the testing was conducted within the past twelve (12) months.

**2.4 Mineral Filler:**

Mineral filler, required by job mix formula, shall be Type I or Type II Portland cement conforming to the requirements of ASTM C 150. The mineral filler shall be added by weight of dry aggregate as specified by the job mix formula.

**2.5 Water:**

The water used shall be free of any injurious impurities. Potable water obtained from public utility distribution lines will be acceptable. The contractor shall state the source of water.

**2.6 Additives:**

Additives may be used to accelerate or retard the breaking of the emulsified asphalt and the set time of the microsurfacing mixture, or to improve the resulting finished surface.

Appropriate additives, and their applicable use range, shall be specified in the job mix formula.

**3. Job Mix Formula: (JMF)**

All materials shall be pre-tested in a certified laboratory, selected by the City, as to the materials suitability for use in the micro-surfacing material. At least seven (7) working days before the micro-surfacing placement commences, the contractor shall provide a job mix formula (JMF) which has been sealed, signed, and dated by a professional engineer registered in the State of Arizona, and experienced in the preparation of micro-surfacing mix designs and approved by the Engineer covering the specific materials proposed for use on the project

Compatibility of the aggregate, mineral filler, water, additives, and polymer modified emulsified asphalt shall be evaluated during the mix design process.

All the materials used in the job mix formula shall be representative of the materials proposed by the contractor for use on the project.

The JMF must be approved by the Engineer prior to the start of micro-surfacing production. After the JMF has been approved, no material substitution will be permitted unless approved by the Engineer.

In addition to the other requirements stated herein, the JMF shall conform to the requirements of Table 5.

<b>TABLE 5</b>		
<b>PROPERTY</b>	<b>TEST METHOD</b>	<b>REQUIREMENT</b>
Residual Asphalt Content Type II Residual Asphalt Content Type III		7.5%-13.5% by weight of dry aggregate 6.5%-12.0% by weight of dry aggregate
Mineral Filler	---	0.1%-2.0% by weight of dry aggregate
Additive	---	As required for mix properties
Water	---	As required for mix properties

Mix Time @ 77°F	ISSA TB-113	Controllable to 120 seconds minimum
Consistency	ISSA TB-106	2.5 – 3.0 cm
Wet Track Abrasion Loss (1 hour soak)	ISSA TB-100	50 g/ft <sup>2</sup> maximum
Wet Track Abrasion Loss (6 day soak)	ISSA TB-100	75 g/ft <sup>2</sup> maximum
Wet Stripping	ISSA TB-114	90% minimum
Wet Cohesion, @ 30 minutes minimum (Set)	ISSA TB-139	12 Kg/cm minimum
Wet Cohesion, @ 60 minutes minimum (Traffic)	ISSA TB-139	20 Kg/cm minimum
Loaded Wheel Sand Adhesion	ISSA TB-109	50 g/ft <sup>2</sup> maximum
Lateral Displacement	ISSA TB-147	5% maximum
Specific Gravity after 1,00 cycles of 125 lb.	ISSA TB-147	2.10 maximum

The JMF shall include test results showing the quantitative effects of moisture content on the unit weight of the aggregate (bulking effect) according to AASHTO T 19.

The JMF must show the recommended proportions of aggregate, mineral filler, water, additive(s), and polymer modified emulsified asphalt; and how the proportions are based (dry aggregate weight, total mix, etc). The JMF must also show the allowable production tolerance for residual asphalt content based on a +/- 1% production tolerance of the emulsified asphalt.

#### 4. Equipment:

##### 4.1 General:

All equipment, tools, and machines used in the application of microseal shall be maintained in satisfactory working condition at all times.

##### 4.2 Proportioning Devices:

Individual volume or weight controls for proportioning mix components shall be provided and properly labeled. Proportioning devices shall be capable of determining the material output at any time.

The proportioning of emulsion, mineral filler, water, and additives shall be tied directly to aggregate flow.

##### 4.3 Mixing Equipment:

The machine shall be specifically designed and manufactured to apply microseal. The material shall be mixed by an automatic-sequenced, self-propelled micro-surfacing mixing machine. It shall be a continuous-flow mixing unit that accurately delivers and proportions the mix components through a revolving multi-blade, double-shafted mixer. Sufficient storage capacity for all mix components is required to maintain an adequate supply to the proportioning controls.

The machine shall be a continuous-run machine capable of loading materials while continuing to apply microsurfacing. The machine shall be equipped to provide the operator with full control of the forward and reverse speeds during application. It shall be equipped with opposite-side driver stations to assist in alignment. The self-loading device, opposite-side driver stations, and forward and reverse speed controls shall be of original equipment-manufacturer design.

The machine shall be equipped with a water pressure system that provides a water spray immediately ahead of and outside the spreader box.

**Truck mounted mixing machines are not allowed.**

#### 4.4 Spreading Equipment:

##### (A) General:

The mixture shall be agitated and spread uniformly in the surfacing box by means of twin-shafted paddles or spiral augers fixed in the spreader box. A front seal shall be provided to ensure no loss of the mixture at the road contact point. The rear seal shall act as a final strike-off and shall be adjustable. The spreader box and rear strike-off shall be so designed and operated that a uniform consistency is achieved and a free flow of material is provided to the rear strike-off. The spreader box shall have suitable means provided to side shift the box to compensate for variations in the pavement geometry.

The spreading equipment shall be maintained free from buildup of the mixture on the paddles or side walls.

##### (B) Secondary Strike-Off:

A secondary strike-off shall be provided to improve surface texture. The secondary strike-off shall be adjustable to match the width of the spreader box and allow for varying pressures to control the surface texture.

##### (C) Rut-Filling Equipment:

When required, micro-surfacing material may be used to fill ruts or other depressions in the existing surface. Ruts shall be filled independently with a rut-filling box. Ruts may require multiple applications with the rut-filling box to restore the cross-section. All rut-filling material should cure under traffic for at least twenty-four hours before additional material is placed.

#### 5. Calibration:

Each mixing unit to be used in the performance of the work shall be calibrated in the presence of the Engineer prior to the start of micro-surfacing production. Previous calibration documentation covering the exact materials to be used may be acceptable, provided that no more than 60 days have lapsed. The documentation shall include an individual calibration of each material at various settings that can be related to the machine metering devices. Any component replacement affecting material proportioning requires that the machine be recalibrated. No machine will be allowed to work on the project until the calibration has been completed and/or accepted. The ISSA Inspector's Manual describes a method that may be used for machine calibration.

#### 6. Weather Limitations:

The micro-surfacing shall only be placed when there is no rain, the air temperature is at least 45°F, and the surface temperature is 50°F or higher. No micro-surfacing shall be applied when there is danger that the finished product will freeze before 24 hours. The mixture shall not be applied if weather conditions prolong opening to traffic beyond a reasonable time.

At any time, the Engineer may require that the work cease or that the work day be reduced in the event that weather conditions, either existing or expected, are anticipated to have an adverse effect upon the micro-surfacing.

## 7. Construction Requirements:

### 7.1 Surface Preparation:

Immediately prior to applying the micro-surfacing, the surface shall be cleared of all loose material, dirt, vegetation, and other objectionable material. The Contractor shall sweep all areas to be surfaced with PM-10 efficient type self-propelled pick up sweeper. All areas will be swept to the satisfaction of the inspector prior to surfacing.

If water is used, cracks shall be allowed to dry thoroughly before applying micro-surfacing.

A paint binder (tack coat) of asphaltic emulsion shall be applied to all Portland cement concrete surfaces when there is a contract item for the work or when the work is required in these special provisions. The asphaltic emulsion for paint binder (tack coat) shall be grade SS 1, SS 1h, CSS1 or CSS1h and shall conform to the provisions of AASHTO M-140 or AASHTO M 208 "Emulsified Asphalts". The asphaltic emulsion shall be mixed in the proportion of one part of emulsion (which contains up to 43 percent water) to 3 parts water. The mixture shall be applied at the approximate rate of 0.04 -0.08 g/yd<sup>2</sup>. When asphaltic emulsion is used as a paint binder (tack coat), micro-surfacing shall not be placed until the asphaltic emulsion has cured.

### 7.2 Protection of Existing Features:

The contractor shall take all necessary precautions to prevent micro-surfacing or other materials used in the work from entering or adhering to manholes, valve boxes, catch basins, etc. Immediately after surfacing, the contractor shall clean and leave any such items in a condition satisfactory to the inspector.

### 7.3 Mixing and Application:

The micro-surfacing mixture shall be proportioned in accordance with the JMF.

The contractor shall determine and document the stockpile moisture content daily, and adjust the operation accordingly.

The micro-surfacing mixture shall be of the desired consistency when deposited in the spreader box and nothing more shall be added to it. The mixing time shall be sufficient to produce a complete and uniform coating of the aggregate. No lumps or unmixed aggregate shall be permitted. The mixture shall be discharged into the spreader box at a sufficient rate to maintain an ample supply across the full width of the spreader box at all times. Overloading of the spreader box shall be avoided.

The micro-surfacing mixture shall possess sufficient stability so that premature breaking of the emulsified asphalt in the spreader box will not occur. The mixture shall be homogeneous during and following mixing and spreading. It shall be free of excess water or emulsion, and free of segregation of the emulsion and aggregate fines from the coarser aggregate. Spraying of additional water into the spreader box is not allowed.

The surface of the existing pavement shall be pre-wetted by fogging with water ahead of the spreader box. Water used in pre-wetting the surface shall be applied such that the entire surface is damp with no apparent flowing water in front of the spreader box. The rate of application of the fog spray shall be adjusted as the ambient temperature, surface texture, humidity, and dryness of the pavement change.

The surface texture variation of the existing pavement throughout the work will dictate the actual spreading rates. The strike-off squeegee shall be adjusted to provide a micro-surfacing thickness which will completely fill the surface voids and provide an additional thickness not exceeding one and one-half times the largest top-size stone. The requirement for an additional thickness not exceeding one and one-half times the largest top-size stone does not apply to rut filling operations, as these depths may vary significantly due to the surface irregularities.

The mixture shall be uniform and homogeneous after placing on the surfacing and shall not show separation of the polymer modified cationic asphalt emulsion and aggregate after setting. The completed surface shall be of uniform texture and free from ruts, humps, depressions, or irregularities. No streaks, such as those caused by oversize aggregate, will be left in the finished surface. If excess oversized aggregate develops, the job will be stopped until the contractor can prove the situation has been corrected. Adequate means shall be provided to protect the micro-surfacing from damage by traffic until such time that the mixture has cured sufficiently so that the micro-surfacing will not adhere to or be picked up by the tires of vehicles.

Placement of the micro-surfacing shall cease a minimum of one hour before the expiration of the road closure hours as specified in Section IV "Traffic Control" of these special provisions, unless the Contractor proves to the satisfaction of the Engineer that the surface will be ready for unrestricted traffic at the expiration of the road closure hours.

Any skips, lumps, or tears in the finished product will not be allowed.

#### 7.4 Joints:

No excessive buildup, untreated areas, or unsightly appearance shall be permitted on longitudinal or transverse joints. The contractor shall provide suitable width spreading equipment to produce a minimum number of longitudinal joints throughout the work. When possible, longitudinal joints shall be located within one foot of the center of a lane or within one foot of the centerline between two adjacent lanes. A four inch maximum overlap will be permitted on longitudinal joints. Partial width passes shall only be used when necessary and shall not be the last pass of any paved area. Longitudinal joints shall have no more than a 1/4 inch difference in elevation when measured by placing a 10-foot straightedge over the joint.

Care shall be taken to ensure straight lines along curbs and shoulders. No runoff on these areas will be permitted.

Construction joints shall be neat in appearance and shall be tapered or feathered to conform to the existing surfacing. All excess material shall be removed from the surface upon completion of each run.

#### 7.5 Handwork:

Areas which cannot be accessed by the mixing machine shall be surfaced using hand squeegees to provide complete and uniform coverage. If necessary, the area to be hand worked shall be lightly dampened prior to mix placement. Handwork shall exhibit the same finish as that applied by the spreader box.

#### **Sampling and Testing Requirements:**

**Material Sampling and Quality Acceptance:** The minimum acceptable sampling frequency shall be at the Engineers direction and shall include:

- Polymer Modified Cationic Asphalt Emulsion
- Mineral Aggregate
- Micro-surfacing Mixture

Polymer Modified Cationic Asphalt Emulsion shall be tested for compliance to the applicable specification in this special provision. At the Engineers discretion the polymer modified cationic asphalt emulsion can be tested for compliance with selected performance indicating portions of the specification, and shall conform to the requirements of Table 2. The mineral aggregate shall be tested for gradation and Sand Equivalent in accordance with these special provisions, and shall conform to the production requirements of Table 3.

The micro-surfacing material may be sampled and tested for residual asphalt content in accordance with AASHTO T164. The residual asphalt content, by weight of dry aggregate, shall be within the allowable production tolerance as presented in the JMF.

Prior to the start of micro-surfacing production, the Engineer shall obtain a representative sample of mineral aggregate for testing. The material shall be tested for gradation in accordance with these special provisions, and shall conform to the production tolerances shown in Table 3. The sand equivalent, fractured coarse aggregate particles, and un-compacted void content shall conform to the requirements of Table 4. If the mineral aggregate does not meet these requirements, production shall not begin until the mineral aggregate is in compliance with these requirements.

#### 7.6 Utility Adjustments:

All City and private utility facilities located within the roadway prism must be adjusted to grade as a result of Microseal operations/applications. Adjustments shall be made as outlined on the Bid Tab and in the special provisions.

## 8. Sampling and Testing Requirements

### 8.1

Should testing indicate results not meeting these requirements, operations shall cease and the contractor shall have the option of providing a new JMF or correcting the deficiencies.

#### *Non-Compliance*

If any two successive tests fail on the stockpile material or emulsion, the job shall be stopped. It is the responsibility of the Contractor, at his own expense, to prove to the City of Glendale that the conditions have been corrected.

### 8.2 Sampling:

Samples of polymer modified cationic asphalt emulsion shall be obtained from the job site storage tank or the application truck storage tank. Aggregate samples shall be obtained from the project stockpile. Inspector shall observe the sampling of one (1) gallon of the emulsion and a representative sample mineral aggregate. Contractor shall provide the samples and container to the inspector. Sampling of the polymer modified cationic asphalt emulsion shall be in accordance with AASHTO T 40. Sampling of the mineral aggregate shall be in accordance with AASHTO T 2.

Samples of the micro-surfacing material shall be obtained from the pug mill discharge prior to the microsurfacing material entering the lay down box and shall be of adequate size to fabricate all test specimens from one sample.

The Engineer or his representative shall be permitted to take samples of materials from the project at any time. The City may elect to perform testing on the samples to verify compliance of the materials with the Specifications.

### 8.3

Testing shall be undertaken by the Engineer whenever deemed necessary. The Engineer, or his representative, may suspend the application of micro-surfacing whenever changes in the materials or quality of the applied micro-surfacing materials are noted. Work shall resume only when the noted deficiencies are corrected to the satisfaction of the Engineer. When work is suspended for this reason, samples will be taken immediately.

The Engineer may send samples to a testing laboratory. Testing will be at the City's expense unless deficiencies are verified by the testing. The contractor shall reimburse the City for the cost of any testing required by deficient materials or application of the micro-surfacing material.

## 9. Rollers

Rollers shall be self-propelled rubber tired rollers (9-12 ton). The roller shall be equipped with an operating water spray system. The resurfaced area shall be subjected to a minimum of two (2) full coverages by the roller. Rolling shall not commence until slurry has cured enough so that the slurry will not pick up when rolled. It shall be rolled until all ridges have been ironed out and a uniform surface is obtained.

Rollers shall have an operating strobe light or rotating beacon.

## 10. Test Strip:

The Contractor shall construct a test strip at the discretion of the Engineer. If required, the test strip shall be 300 feet to 500 feet long and shall consist of the application courses specified. The test strip shall be constructed at either at night time or early morning and shall cure and be open to traffic within 75 minutes of application.

The Engineer will evaluate the completed test strip after 12 hours of traffic on the completed test strip to determine if the JMF and placement procedure are acceptable. If the JMF or the placement procedure is determined by the Engineer to be unacceptable, the test strip will be rejected, the Contractor shall make modifications, and a new test strip shall be constructed and evaluated by the Engineer. The cost of materials and placement of the test strips, which have been rejected, shall be borne by the Contractor and will not be considered as part of the contract work. If ordered by the Engineer, rejected test strips shall be removed at the Contractors expense.

## 11. Procedure:

The contractor shall perform the service in a safe, acceptable, workmanlike manner. Personnel shall be experienced, knowledgeable and capable in all aspects of performing the service. The same personnel that start the project shall remain on the project for the life of the project.

The equipment shall be in good repair and serviceable to operate in a reliable and safe manner. Any equipment or piece of equipment that fails to produce the desired surface shall be repaired and/or replaced by the Contractor at no cost to the City. The Public Works Operations Manager or their designee shall determine if the equipment and/or finished product are in compliance

### 11.1

Contractor shall sand intersections as directed by the Engineer to allow traffic to cross freshly placed microsurfacing at intersections, business entrances/exits and other locations that cannot, in the estimation of the Engineer, be completely closed to traffic. Sand material will be the same aggregate used in the micro-surfacing mixture.

The Contractor shall be responsible for all clean up of the work areas and staging areas. The Contractor shall be responsible for covering and uncovering all structure covers, such as manholes, valve, and monument covers. All street (full width and gutters) shall be swept by mechanical means no sooner than 24 hrs after microsurfacing placement is complete.

At the end of each day's production, the contractor will provide to the Inspector a report containing the following information:

- a. Tons of dry aggregate consumed that day
- b. Tons of emulsion consumed that day; and
- c. Footage covered that day. This report shall be received no later than 10:00 a.m. of the following day.

## 12. Schedule of Work:

Work shall be performed during the hours of 8:30 a.m. to 4:00 p.m. The contractor shall provide schedules every Thursday for the following week's work. The schedule shall include, but not be limited to the following: A map indicating the streets to be sealed each day including limits, the sequence of streets for each days work and which side of street to be sealed for each days work.

### 13. Punch List Items:

All punch list items must be completed within 30 days after punch list is received by contractor from the City's representative.

### 14. Water:

Cost of water, if furnished by the City systems, will be borne by the City. The Contractor will have to arrange for the water to be metered.

### 15. Area Omissions:

All areas temporarily omitted by the Contractor during normal operations shall be logged and a list of the missed areas (addresses or intersections) given the inspector before the start of the next day's work.

### 16. Clean Up:

Clean-up shall include the removal of microseal material from manhole covers, valve covers, survey monuments, gutters, curbs, etc., in the job area on a daily basis. Clean up shall also include any materials used to clean up the surface treatment. The contractor and the inspector shall conduct a pre-final for each stockpile prior to commencing work in the next scheduled stock pile location.

The Contractor shall sweep, with PM-10 efficient type self-propelled pick up sweeper, all areas surfaced, no sooner than 24 hours after application. All areas will be swept to the satisfaction of the inspector before final acceptance of the project will be given. (\*\*If additional sweeping is required it shall be considered incidental to the project\*\*).

### 17. Repair of Early Distress:

If bleeding, raveling, delaminating, rutting, or wash boarding occurs within 60 days after placing the microsurfacing, the Contractor shall diligently pursue repairs by any method approved by the Engineer. The Contractor shall not be relieved from maintenance until repairs have been completed.

#### **Patching:**

Areas that require patching shall be full lane width using type II micro surfacing. All microsurfacing repair work shall be completed prior to moving to the next area to be placed. All traffic affected by this construction shall be regulated in accordance with the City of Phoenix -Traffic Barricade Manual.

### 18. Streets:

The streets to have micro-surfacing applied are listed in the Attachments. The estimated areas includes cul-de-sacs, elbow turns and curb returns. The City reserves the right to make additions or deletions to the original quantity amount, and/or to the streets or number of streets, at the price bid per square yard.

### 19. Traffic Control:

All traffic affected by this construction shall be regulated in accordance with the City of Phoenix "Traffic Barricade Manual," and these Special Provisions. The following traffic restrictions are minimum requirements throughout the construction period:

- A. All traffic restrictions listed herein are to supplement the City of Phoenix "Traffic Barricade Manual," and are not intended to delete any part of the manual. All reference in the "Traffic Barricade Manual" to "arterial" and/or "collector" streets shall mean "arterial and/or major arterial" streets and are referred to as "major" streets in the following sections.
- B. It is the preference of the City to avoid weekend construction work. Contractor must request one (1) week in advance from the City of any intended weekend work. The City's Transportation Director and Project Manager will determine if such work shall be permitted. Contractor shall notify public a minimum of three (3) days prior to performing any authorized weekend work.
- C. A minimum of two travel lanes (one for each direction) shall be maintained open to traffic at all times on all major streets. All work that enters or crosses a major street must be done at times other than 6:00 a.m. to 8:30 a.m., and 4:00 p.m. to 7:00 p.m.
- D. A travel lane shall be defined as twelve (12) feet of roadway with a safe motor vehicle operating speed of twenty-five (25) miles per hour.
- E. A travel lane will not be considered as satisfactorily open to traffic until it has been graded reasonably smooth and is paved. This shall be considered temporary pavement and shall be removed completely before proceeding with final surfacing.
- F. The Contractor shall provide and maintain all necessary traffic controls, and must provide flashing arrow boards to protect and guide traffic for all work in the construction area. Additionally, the Contractor shall provide and maintain message boards (VMS) for arterial work to inform traffic of alternate routes. The message boards shall be in place and operational 1 week in advance of commencement of work on the segment along the north and south sides of 43rd Avenue, 51st Avenue and 59th Avenue, and adjacent to the east and west limits of the project along Northern Avenue. Final locations to be approved by the City's Transportation Department.
- G. Intersection area shall be defined as all of the area within the right-of-way of intersecting streets, plus two-hundred fifty (250) feet beyond the center of the intersected streets on all legs of the intersection. The City may allow weekend intersection closures. The Contractor must coordinate any closure schedule and approval through the City's Transportation Director and Project Manager.
- H. The Contractor shall maintain all existing traffic signs erect, clean and in full view of the

intended traffic at all times. Street name signs at major street intersections shall be maintained erect at all times. If any signs interfere with construction, the Contractor shall notify the Inspector and the City Signs Supervisor at least 48 hours in advance for City forces to remove said signs. The Contractor shall be responsible for having all temporary traffic signs installed and maintained during construction. The Transportation Department will re-set all traffic and street name signs to permanent locations when notified by the Engineer that construction is complete.

- I. Local access to all properties on the subject project shall be maintained at all possible times in the form of a safe and reasonable direct route to at least one of the above defined major streets. Whenever local access cannot be maintained, the Contractor shall notify the affected property owner or user and the Engineer at least 1 week in advance. Contractors shall notify the City ten (10) working days prior to access restrictions.
- J. The Contractor shall maintain pedestrian paths that meet ADA requirements at all times during the entire length of the project.
- K. The Contractor shall be required to provide a uniformed off-duty City of Glendale police officer to assist with traffic control whenever traffic in any one direction is restricted to one lane at a signalized major intersection or at other locations if it should become necessary in the opinion of the Transportation Director or Designee. If the Contractor chooses to use a police officer at other locations during peak traffic hours or to assist with his other traffic control operations, the cost shall be included in the lump sum for "Traffic Control" and not paid out of the hours allowed for "Off Duty Glendale Police Officer." All requests for off-duty officers will be made through the Glendale Police Department, Off-Duty Work Administrator. The Contractor must provide evidence of workmen's compensation coverage before any officer will be permitted to work. The City Transportation Director or Designee can request off-duty officers for any intersection closure if deemed necessary for congestion and/or safety.
- L. Measurement for payment of the uniformed off-duty Glendale police officer hours will be made by the actual number of man-hours used for traffic control at signalized major intersections or as approved by the Engineer. Because the quantity of hours is dependent on the Contractors schedule of activities, the unit price bid for this item will be administered as a contingency bid item and any adjustment in hours will not be subject to the 20 percent limitation.
- M. Payment for the off-duty Glendale police officer will be made at the contract unit price bid per hour for OFF DUTY GLENDALE POLICE OFFICER and shall include the net hourly rate of \$35.00 per police officer with a three (3) hour minimum. The net hourly rate shall be increased to include withholding for Federal, State, FICA, Medicare, Workmen's Compensation insurance and any payroll administrative costs.
- N. Overtime pay for the off-duty Glendale police officer shall be paid for any time over 8 hours in a continuous shift. Overtime pay rate shall be the contract unit price bid per hour x 1.5. A work shift over 8 hours must be approved by the Engineer before overtime pay calculation can commence.

- O. The Contractor shall prepare a traffic control plan for the project and submit it to the City Transportation Director for review and approval at least seven (7) working days before the pre-construction conference. The traffic control plan shall include flashing arrow boards, barricades and signs, and shall address how local access to adjacent properties will be handled in accordance with the specifications herein. Any changes to the traffic control plan during construction shall be submitted to the City Transportation Director for approval at least seventy-two (72) hours before implementation.
- P. Payment for this item shall be made at the contract lump sum price for TRAFFIC CONTROL.
- Q. It is the City's desire to maintain one lane of traffic in each direction on minor streets whenever possible. Should it become imperative for the Contractor to close off a portion of any minor street or reduce the travel way to a single lane, he must obtain approval from the City Transportation Director three (3) business days prior to implementing a traffic control change. He must provide all the necessary signs to detour traffic and/or flagmen to control traffic for a single lane. The maximum amount of time that the street may be closed is from 9:00 a.m. until 4:00 p.m.
- R. Temporary lane markers (dividing same direction of travel lanes) shall be applied immediately following paving operations and prior to allowing public traffic on the segment.
- S. Within 24 hours after paving is completed on any street, the Contractor shall layout temporary striping per City of Glendale Supplemental Specifications, subsections "C" and "E" using water based paint for the City Transportation Department to review and approve. The Contractor shall have a maximum of five (5) days to stripe the roadway after the final asphalt lift has been completed, and shall not have more than one mile of overlay roadway ready to be striped at any time. Contractor will coordinate with striping subcontractor a minimum of two weeks prior to the start of striping operations. Temporary barricades shall only remain in place for a maximum of 24 hours following the completion of paving.

## 20. Access:

The Contractor shall maintain local access to all side streets, access roads driveways, alleys, and parking lots at all times and shall notify residents 48 hours in advance of any restrictions which will affect their access. The Contractor shall restore the access as soon as possible. If the primary access cannot be restored in a timely manner, the Contractor shall provide an alternative which shall be pre-determined with the residents prior to imposing any restrictions. Any local street restrictions imposed shall be such that local area traffic circulation is maintained.

Access shall be maintained to adjacent businesses at all times during their hours of operation. Properties having more than one point of access shall not have more than one access restricted for more than fourteen (14) calendar days at any given time. Access to adjacent driveways shall be provided during all non-working hours. Any business restrictions shall be coordinated with the affected business at least 48 hours prior to imposing restrictions.

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The Contractor shall ensure that all sidewalks on this project remain in compliance with all the issues outlined by the American Disabilities Act of 1990. All pedestrian-walking areas, whether paved or unpaved, shall be maintained open and safely usable at all times. Such measures as backfilling or ramping at a 12:1 slope to existing sidewalks, or providing alternate sidewalk areas adjacent to existing sidewalks may be used. In high pedestrian use areas, the Public Works Operations Manager or her designee may request temporary hard-surface walkways, and/or covered pedestrian walkways to be installed at no additional cost to the City.

The Contractor shall provide clean and safe school zones, crosswalks, and walkways for students attending nearby schools during all hours of school use. In addition to school zones and crosswalks, the Contractor shall maintain accessibility to all school bus routes during all hours of school use. The Contractor shall notify the school Principal(s) and the school administration office at least 48 hours prior to any restrictions, and shall restore access as soon as possible.

The Contractor shall maintain the Emergency entrance to Hospital by way of a paved lane for emergency vehicles at all times for the duration of the project. The Contractor shall coordinate with the Hospital 48 hours or more prior to any restrictions, and shall restore access as soon as possible.

The Contractor shall maintain emergency vehicle access to and from the police station at all times. The Contractor shall coordinate with the Police Department 48 hours or more prior to any restrictions, and shall restore access as soon as possible.

The Contractor shall maintain access to all Parks during park hours. The Contractor shall coordinate with the Parks Department 48 hours or more prior to any restrictions, and shall restore access as soon as possible.

The Contractor shall coordinate or provide sanitation pick-up for affected residents by relocating trash containers, or by providing alternative measures acceptable to the Solid Waste Division of the City Public Works Department. At any time project construction shall require the closure or disruption of traffic in any roadway, alley, or refuse collection easement such that normal refuse collection will be interrupted, the Contractor shall, prior to causing such closure or disruption, make arrangements with the City of Peoria Solid Waste Division in order that refuse collection service can be maintained.

The Contractor shall maintain all existing bus stop locations on this project in a safe manner, or provide alternate bus stop locations and related directional signage as required by the Public Works Operations Manager or her designee.

#### 21. Measurement:

Micro-surfacing will be measured by the Square Yard. The quantity of micro-surfacing to be paid for will be the square yards of actual area covered by the micro-surfacing material.

Furnish and Install temporary traffic control devices shall be measured as a single complete item of work and paid at the lump sum price indicated on the Bid Tab, which price shall be full compensation for the work as described herein and required to provide temporary traffic control.

#### 22. Payment:

The contract price paid per square yard for microseal shall include full compensation for furnishing all labor, materials, tools, equipment, traffic control and incidentals, and for doing all the work involved in placing micro-surfacing, complete in place, including asphaltic emulsion (paint binder and/or tack coat), testing for and furnishing JMF, cleaning the surface, furnishing added water and set-control additives, and protecting the micro-surfacing until it has set, as shown on the plans, as specified in these special provisions, and as directed by the Engineer.

Payment for traffic control necessary to perform and complete Microseal operations/applications shall be made at the contract lump sum price for TRAFFIC CONTROL. No work anticipated for reimbursement under this Bid Item shall be initiated by Contractor until Contractor, Engineer and COG agree on scope and cost

## SUPPLEMENTAL SPECIFICATIONS - ADJUSTMENT OF EXISTING MANHOLES, VALVES, HANDHOLES, SEWER CLEANOUTS AND SURVEY MONUMENTS

### I. GENERAL:

The City of Glendale adopted the "Uniform Standard Specification for Public Works Construction", which are sponsored and distributed by the Maricopa Association of Governments. These documents, with revisions, are hereby made a part of these contract documents. Whenever in the Uniform Standards Specification, the words "the contracting agency" is used, the meaning shall be the City of Glendale.

In all cases where ASTM, ASSHTO, AWWA, USAS, Federal, City of Phoenix, MAG Specifications, Maricopa County, Arizona State Highway, or other standard specifications are referred to, unless otherwise stated, revision, supplements or addenda issued on or before the date of this contract, shall prevail.

In the event of any conflict between these project specifications and the requirements of the plans, detail drawing, MAG Standard Details and Specifications, these project specifications shall prevail.

### II. CONSTRUCTION SPECIFICATIONS

#### *UTILITY ADJUSTMENTS*

The work under this section shall be done in accordance with Sections 345 and 405, MAG Uniform Standard Specifications as modified by these Special Provisions.

During the adjusting of manholes, the contractor will strictly adhere to the O.S.H.A. requirements, (29 CFR part 1910) Subsection 146 "Permit Required Confined Spaces" subpart J. All atmospheric testing and safety equipment must be utilized with permits available for inspection.

The Contractor will be responsible for the tie-out of all water valves, manholes, cleanouts and survey monuments and shall provide to the Inspector, prior to the Microseal application, a map clearly locating all survey monuments, frames and covers to be adjusted after paving. The methods used shall be approved by the Engineer prior to starting work.

The Contractor shall locate all existing frames and covers within the project area prior to performing microseal operations. The Contractor shall then adjust all existing frames and covers in the project area to the new pavement elevation and slopes with the possible exception of utility company manholes and valve boxes. The Contractor will only adjust the facilities to new surface elevation after the microseal is complete. All manholes and valves will be marked with paint on the same day as the microseal and adjustments to frames and covers will be accomplished within seven days after completion of the microseal in a specific location unless otherwise approved in writing by the Engineer. **Under no circumstance shall utility manhole and valve adjustments be completed until after (water-based) paint striping is finalized.** Contractor shall keep rings and covers matched and shall replace them to their original locations. The Contractor shall notify the engineer of any missing manhole or valve covers for replacement.

The Contractor shall remove asphalt, chip seal and other material from all metal covers encountered within the limits of this project. The method for removal of this material must be approved by the Engineer prior to being used. This work shall be completed prior to adjusting the frame and shall be performed with the adjustment and/or installation. The Contractor shall remove all debris that falls into any valve box, sewer clean out, sewer manhole, storm drain manhole, handhole or any other utility provider's structure as a result of any activity related to the construction activities of this project, and the cost shall be at the Contractor's expense.

Prior to pouring the concrete after setting manhole frames, a 10-foot straight edge shall be used to ensure the proper slope and elevation. The concrete to be used shall attain a minimum strength of 2,000 psi within 4 hours of placement. The Contractor may use a site-added set accelerating admixture such as Daraset, by W.R. Grace; Pozzutec20, by Master Builders or approved equivalent. In no case, shall the Contractor use a chloride containing accelerator. Mix design shall be submitted to the Engineer for approval prior to the commencement of the adjustments. Protection of all utilities is the responsibility of the contractor. All cracked, exposed aggregate, and adjustments with graffiti will be subject to removal. No concrete patching is acceptable.

Note (1) A utility company representative MUST be present at all times when adjusting a utility company facilities. The Contractor shall coordinate with the Engineer and with representatives of the various utilities regarding the adjustment and inspection of their manholes and valve boxes. Utility company's specifications shall be adhered to during adjustment. The Contractor shall be responsible for obtaining any additional specifications requirements from the utility company.

Note (2) Arizona Public Service Company manholes must be grouted on the inside and the outside for a waterproof seal.

The individual utility companies have the right to accept or reject the Contractor's bid for their portion of the adjustments. If the Contractor's bid for the adjustments is rejected, the utility company will perform their own adjustment and the bid item quantity will be adjusted accordingly. Any utility inspection costs associated with the utility work will be responsibility of the Contractor. **The following information shall be incorporated by the Contractor:**

Arizona Public Service may utilize the Contractor to adjust manholes. The Contractor shall adjust to A.P.S. standards. The Contractor shall provide an approved schedule to A.P.S. All A.P.S. manholes must be grouted on the inside and the outside for a waterproof seal.

Southwest Gas may utilize the Contractor to adjust their manholes and valves. The contractor shall adjust to Southwest Gas standards and requirements. The contractor shall provide an approved schedule to Southwest Gas and notify them one (1) week prior to any work required.

Salt River Project (water) structures shall be adjusted by the Contractor. The Contractor shall utilize construction details provided by Salt River Project. SRP manholes/vaults to be adjusted to grade may require partial or full demolition and rebuild of the structure. Contractor to verify necessary requirements with SRP prior to construction activities on their structures. Contractor to adjust mill/replace depths adjacent to SRP structures in the event they cannot be adjusted to grade. Contact Robert Maurer, (602) 236-2962 two weeks prior to any work required.

Salt River Project (power) shall adjust their manholes. The Contractor shall provide an approved schedule to Salt River Project (power) and notify them two (2) weeks prior to any

work required.

Centurylink may utilize the Contractor to adjust their manholes. The Contractor shall provide an approved schedule to Centurylink and notify them one (1) week prior to any work required.

The Contractor shall maintain accurate records of utility adjustments so the City can recover the adjustment costs from the appropriate utility.

### III. MEASUREMENT & PAYMENT

The accepted measurement and payment shall be made on the basis of the contract unit price bid per each basis, which price shall be full compensation for the work, complete in place, with no allowance for waste, and shall include labor, equipment, tools, and incidentals to complete the work as prescribed.

No payment will be made for rejected materials. Contractor shall remove and replace rejected material at their own cost.

**\*\*\*END OF SUPPLEMENTAL SPECIFICATIONS – ADJUSTMENT OF EXISTING  
MANHOLES, VALVES, SEWER CLEANOUTS AND SURVEY MONUMENTS\*\*\***

MICRO SEAL INDEX

Treatment	Road Name	Road From	Road To	Road Length	Pvmt Width	Pvmt Area (S.Y.)	Exhibit No.
MICRO SEAL	W NORTHERN AVE.	N GRAND AVE	RR TRACKS (WEST SIDE)	1,010	65	7,294	ADDENDUM #2
<b>TOTAL</b>						<b>7,294</b>	



# Engineering Department

# Memorandum

DATE: February 13, 2013  
TO: All Plan and Specification Holders  
FROM: Engineering  
SUBJECT: PROJECT NO. 121312 – 2012/2013 SLURRY SEAL PROGRAM

## ADDENDUM NO. 3



EXPIRES 03/31/2013

In accordance with the contract documents "Information for Bidders," Page 4, Paragraph 12 CHANGES TO PLANS AND DOCUMENTS, the following revisions to the plans and specifications shall become a part of the contract documents and the bidder shall acknowledge receipt thereof as directed in Paragraph 13 of the Information for Bidders.

*Please see the following clarifications/revisions:*

**In the SUPPLEMENTAL SPECIFICATIONS – MICROSEAL, sent out as an inclusion to Addendum 2, please see the following revision:**

**1. Addendum No. 2, SUPPLEMENTAL SPECIFICATIONS – MICROSEAL Page A-6, Section 4. Equipment, Item 4.3 Mixing Equipment: REMOVE the following paragraphs:**

The machine shall be specifically designed and manufactured to apply microseal. The material shall be mixed by an automatic-sequenced, self-propelled micro-surfacing mixing machine. It shall be a continuous-flow mixing unit that accurately delivers and proportions the mix components through a revolving multi-blade, double-shafted mixer. Sufficient storage capacity for all mix components is required to maintain an adequate supply to the proportioning controls.

The machine shall be a continuous-run machine capable of loading materials while continuing to apply microsurfacing. The machine shall be equipped to provide the operator with full control of the forward and reverse speeds during application. It shall be equipped with opposite-side driver stations to assist in alignment. The self-loading device, opposite-side driver stations, and forward and reverse speed controls shall be of original equipment-manufacturer design.

**REPLACE with the following paragraphs:** The machine shall be specifically designed and manufactured to apply microseal. The material shall be mixed by an automatic-sequenced, self-propelled micro-surfacing mixing machine. It shall be a continuous-flow mixing unit that accurately delivers and proportions the mix components through a revolving multi-blade, double-shafted mixer. Sufficient storage capacity for all mix components is required to maintain an adequate supply to the proportioning controls.

The machine shall be equipped to provide the operator with full control of the forward and reverse speeds during application. It shall be equipped with opposite-side driver stations to assist in alignment. The loading device, opposite-side driver stations, and forward and reverse speed controls shall be of original equipment-manufacturer design.

**2. Addendum No. 2, Page 1: REPLACE the existing Page 1 of Addendum No. 2 (without Engineer's Seal), with the attached Page 1 of Addendum No. 2 (with Engineer's Seal).**

**~ End of Addendum ~**



# Engineering Department

# Memorandum

DATE: February 8, 2013  
TO: All Plan and Specification Holders  
FROM: Engineering  
SUBJECT: PROJECT NO. 121312 - 2012/2013 SLURRY SEAL PROGRAM



EXPIRES 03/31/2013

## ADDENDUM NO. 2

In accordance with the contract documents "Information for Bidders," Page 4, Paragraph 12 CHANGES TO PLANS AND DOCUMENTS, the following revisions to the plans and specifications shall become a part of the contract documents and the bidder shall acknowledge receipt thereof as directed in Paragraph 13 of the Information for Bidders.

### *Please see the following clarifications/revisions:*

1. Page 38, Para.7. Traffic Regulations: ADD the following sentences to Item 7.1.4: Full street closures will not be allowed without specific permission from the Transportation Director. In order to facilitate public convenience, only half street closures will be allowed at any given time. Reasonable access to residents within affected subdivisions must be maintained at all times.
2. Page 44, Project Sign: REMOVE the current CONSTRUCTION SIGN DETAIL and REPLACE with the following: The contractor is to provide a minimum of two (2) portable signs at each work location, minimum size 48" x 30" with the following information - City of Glendale 2012/2013 Slurry Seal Program, Project Hotline 000-000-0000 (phone number to be provided).
3. Page 45, SUPPLEMENTAL SPECIFICATIONS - ASPHALT REMOVE/REPLACE. ADD the following sentence to Item 1. Description: All street pavement replacement depth shall be minimum three inches (3"), or match existing thickness, whichever is greater.
4. Page 49, Section 6. Cleaning and Preparing Cracks or Joints. REMOVE the following sentences: Routing cracks and joints will extend crack sealant life and performance. Most cracks in Maricopa County have less than 1/8" movement over the course of a year. On the cracks that have spacing which creates more than 1/8" movement it is recommended that the cracks be routed.
5. Page 49, Section 6. Cleaning and Preparing Cracks or Joints. DELETE ENTIRELY Para. 6.1 Routing



# Engineering Department

# Memorandum

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DATE: February 14, 2013  
TO: All Plan and Specification Holders  
FROM: Engineering  
SUBJECT: PROJECT NO. 121312 – 2012/2013 SLURRY SEAL PROGRAM

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## ADDENDUM NO. 4



EXPIRES 03/31/2013

In accordance with the contract documents "Information for Bidders," Page 4, Paragraph 12 CHANGES TO PLANS AND DOCUMENTS, the following revisions to the plans and specifications shall become a part of the contract documents and the bidder shall acknowledge receipt thereof as directed in Paragraph 13 of the Information for Bidders.

*Please see the following clarifications/revisions:*

**In the SUPPLEMENTAL SPECIFICATIONS – MICROSEAL, sent out as an inclusion to Addendum 2, please see the following revision:**

1. Addendum No. 2, SUPPLEMENTAL SPECIFICATIONS – MICROSEAL Page A-7, Section 4. Equipment, Item 4.3 Mixing Equipment: **REMOVE** the following statement:

**Truck mounted mixing machines are not allowed.**

2. Addendum No. 2, Page A-11, Section 9. Rollers: **DELETE** Section 9 entirely.

3. Addendum No. 2, Page A-12, Section 10. Test Strip: **DELETE** Section 10 entirely.

4. Addendum No. 2, Page A-16, Paragraph S: **DELETE** Paragraph S entirely.

**In Addendum No. 3, dated February 13, 2013, please see the following revision:**

**1. Addendum 3, Page 2: REMOVE** the following paragraph:

The machine shall be equipped to provide the operator with full control of the forward and reverse speeds during application. It shall be equipped with opposite-side driver stations to assist in alignment. The loading device, opposite-side driver stations, and forward and reverse speed controls shall be of original equipment-manufacturer design.

**REPLACE** with the following paragraph:

The machine shall be equipped to provide the operator with full control of the forward and reverse speeds during application. The loading device and the forward and reverse speed controls shall be of original equipment-manufacturer design.

~ End of Addendum ~

# **PROJECT SPECIFICATIONS AND CONTRACT DOCUMENTS**

## **MAYOR**

Jerry P. Weiers

## **COUNCIL MEMBERS**

Norma S. Alvarez

Samuel U. Chavira

Ian Hugh

Yvonne J. Knaack

Manuel D. Martinez

Gary D. Sherwood

## **ACTING CITY MANAGER**

Horatio Skeete

## **CITY CLERK**

Pamela Hanna

## **CITY ATTORNEY**

Craig D. Tindall

## **ACTING CITY ENGINEER**

Gregory Rodzenko



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NOTICE TO CONTRACTORS

Sealed bids shall be either mailed to the City of Glendale Engineering Department, 5850 West Glendale Avenue, Glendale, Arizona, 85301, or hand-delivered to the Engineering Department office, third floor, 5850 West Glendale Avenue, Glendale, Arizona, for furnishing all plant, material, equipment and labor, and to complete construction of: **PROJECT NO. 121312 2012/2013 SLURRY SEAL PROGRAM.** Project includes surface preparation and repairs to prioritized residential streets by crack sealing, slurry seal and micro-seal applications.

Bids must be received by the Engineering Department of the City of Glendale no later than 2:00 P.M., FEBRUARY 7, 2013. Any bid received after that time will not be considered and will be returned to the bidder. At that time, the bids will be publicly opened and read aloud in the Engineering Department Conference Room, 5850 West Glendale Avenue, Glendale, Arizona.

A pre-bid conference will be held on JANUARY 30, 2013, at 2:00 P.M., in the Engineering Department Conference Room, 5850 West Glendale Avenue, Glendale, Arizona. Bidders, contractors, and other interested parties are invited to attend this conference which will be conducted by the Owner and Engineer to answer any questions.

Plans, specifications and contract documents may be examined, and copies may be obtained at City of Glendale Engineering Department, 5850 West Glendale Avenue, Glendale, Arizona. A non-refundable charge of \$15 shall be paid for each set of plans and specifications issued from this office.

Each bid shall be in accordance with the plans, specifications and contract documents, and shall be set forth and submitted on the BID DOCUMENTS included with the project specifications book. The BID DOCUMENTS may be removed from the project specifications book and submitted independently of such book. Each bid shall be accompanied by a proposal guarantee, in the form of a certified or cashier's check or bid bond for ten percent (10%) of the amount of bid, made payable to the order of the City of Glendale, Arizona, to insure that the successful bidder will enter into the contract if awarded to him and submit the required Certificate of Insurance, Payment Bond and Performance Bond. All proposal guarantees, except those of the three lowest qualified bidders, will be returned immediately following the opening and checking of proposals. The proposal guarantees of the three lowest qualified bidders will be returned immediately after the contract documents have been executed by the successful bidder. The proposal guarantee shall be declared forfeited as liquidated damages if the successful bidder refuses to enter into said contract or submit the Certificate of Insurance, Payment Bond and Performance Bond after being requested to do so by the City of Glendale, Arizona.

The City of Glendale reserves the right to reject any or all bids or waive any informality or irregularity in a bid. No bidder may withdraw his bid for a period of fifty (50) days after opening and reading of the bids.

The City of Glendale is an equal opportunity employer and minority business enterprises and women's business enterprises are encouraged to submit bids.

CITY OF GLENDALE, ARIZONA

INFORMATION FOR BIDDERS

1. **ELIGIBILITY OF CONTRACTORS:** When calling for bids for contracts for public work to be performed on behalf of the State or any political subdivision thereof, which will be paid for from public funds, no bid shall be considered for performance of a contract, including construction work which is not submitted by a bidder duly licensed as a contractor in this State. No bid shall be awarded to any contractor or entity not authorized to do business in the State of Arizona by the Arizona Corporation Commission, as required by statute.

2. **PROPOSAL:** Bids to receive consideration shall be made in accordance with the following instructions:

(a) Before submitting a bid, bidders shall carefully examine the plans and specifications and contract documents, visit the site of the work, fully inform themselves as to all existing conditions and limitations.

(b) Bids shall be submitted on the "PROPOSAL" forms provided and delivered to the City of Glendale Engineering Department on or before the day and hour set in the "NOTICE TO CONTRACTORS," as published. Bids shall be enclosed in a sealed envelope marked on the outside lower right-hand corner indicating:

1. The bidder's name and address.
2. The project number.
3. The title of the project.
4. The time and date the bids are to be received.

(c) It is the sole responsibility of the bidder to see that his bid is received in proper time. Any bids received after the scheduled closing time for receipt of bids will be returned to the bidder unopened.

(d) The signatures of all persons shall be in longhand. Any interlineations, alterations, or erasures must be initialed by the signer of the bid.

(e) Bids shall not contain any recapitulations of the work to be done. No oral, telegraphic, telephonic, or modified proposals will be considered.

3. **BID SECURITY:** Each proposal shall be accompanied by a proposal guarantee in the form of a certified or cashier's check or bid bond, with a properly executed Power of Attorney attached, in an amount equal at least to ten percent (10%) of the proposal payable without condition to the City. If a bid bond is submitted with the bid it shall be issued by a company licensed with the Arizona Department of Insurance and authorized to issue such bonds in this state. **NO BONDS ISSUED BY INDIVIDUAL SURETIES WILL BE ACCEPTED. The company issuing the bid bond shall have a rating of not less than A- in the BEST rating available at the time this project was let to bid.** The proposal guarantee shall guarantee that the bidder, if awarded the contract, will, within ten (10) working days after the award, execute such contract in accordance with the proposal and in manner and form required by the contract documents, and will furnish good and sufficient bond for the faithful performance of the same, a payment bond and a certificate of insurance. The bid securities of the three (3) lowest bidders will be retained until the contract is awarded, or other disposition made thereof. The bid securities of all bidders, except the three (3) lowest, will be returned promptly after the canvass of bids. In the event the Contractor fails, within ten (10)

working days after the award, to execute said Contract and deliver the Performance and Labor and Material Payment Bonds and the Certificate of Insurance, the Bid Security shall become the property of the City.

4. **WITHDRAWAL OF BID:** Any bidder may withdraw his bid, either personally, by telegram or by written request, at any time prior to the scheduled closing time for receipt of bids. No bid may be withdrawn by telephone. Any bid withdrawn will not be opened and will be returned to the bidder. After opening and reading of the bids, no bidder may withdraw his bid for a period of fifty (50) days from the date of opening and reading.

5. **LATE BIDS:** Bids received after the scheduled closing time for receipt of bids, as contained in the "Notice to Contractors," will not be considered and will be returned to the bidder.

6. **AWARD OR REJECTION OF BIDS:** The contract will be awarded to the lowest and best qualified responsive bidder complying with these instructions and with the "NOTICE TO CONTRACTORS." The City of Glendale, Arizona, however, reserves the right to accept or reject any or all bids or to waive any or all informalities or irregularities in the bid. Alternates may be accepted depending upon the availability of City funds. Accepted alternates will be considered in determining the lowest responsive and responsible bidder.

7. **BIDDERS INTERESTED IN MORE THAN ONE BID:** No person, firm or corporation shall be allowed to make, file, or be interested in more than one (1) bid for the same work unless alternate bids are called for in the specifications or any addenda. A person, firm, or corporation who has submitted a sub-proposal to a bidder, or who has quoted prices on materials to a bidder is not thereby disqualified from submitting a sub-proposal or quoting prices to other bidders.

8. **CONTRACT AND BONDS:** The form of contract, which the successful bidder as Contractor will be required to execute and the forms of bonds which he shall be required to furnish are included in the contract documents and should be carefully examined by the bidder. The successful bidder shall use the forms provided or such other forms as are acceptable by the City. The Contract and Performance and Labor and Material Payment Bonds will be executed in three (3) original counterparts. All bonds shall be issued by companies licensed with the Arizona Department of Insurance and authorized to issue such bonds in this state. **NO BONDS ISSUED BY INDIVIDUAL SURETIES WILL BE ACCEPTED. The company issuing any bond shall have a rating of not less than A- in the BEST rating available at the time this project was let to bid.**

9. **INSURANCE REQUIREMENTS:** Contractor, and each Sub-contractor performing work or providing materials related to this Agreement must procure and maintain the insurance coverages described (collectively, "Contractor's Policies"), until each Parties' obligations under this Agreement are completed. Contractor must at all times relevant hereto carry a commercial general liability policy with a combined single limit of at least \$1,000,000 per occurrence and \$2,000,000 annual aggregate. **Contracts in excess of \$250,000 shall require \$2,000,000 single occurrence/\$5,000,000 annual aggregate.**

Sub-contractors must at all times relevant hereto carry a general commercial liability policy with a combined single limit of at least \$1,000,000 per occurrence.

This commercial general liability insurance must include independent contractors' liability, contractual liability, broad form property coverage, products and completed operations, XCU

hazards if requested by the City, and a separation of insurance provision.

These limits may be met through a combination of primary and excess liability coverage.

Auto. A business auto policy providing a liability limit of at least \$1,000,000 per accident for Contractor and \$1,000,000 per accident for Sub-contractors and covering owned, non-owned and hired automobiles.

Workers' Compensation and Employer's Liability. A workers' compensation and employer's liability policy providing at least the minimum benefits required by Arizona law.

Equipment Insurance. Contractor must secure, pay for, and maintain all-risk insurance as necessary to protect the City against loss of owned, non-owned, rented or leased capital equipment and tools, equipment and scaffolding, staging, towers and forms owned or rented by Contractor or its Sub-contractors.

10. SUBCONTRACTORS LISTING AND CERTIFICATION OF CONTRACT COMPLIANCE: The contractor will be required to furnish the form of subcontractors listing and certification of contract compliance with the executed contract documents. This information is requested for tracking and insurance purposes only.

11. INTERPRETATION OF PLANS AND DOCUMENTS: If any person contemplating a bid for proposed contract is in doubt as to the true meaning of any part of the plans, specifications, or other proposed contract documents, or finds discrepancies in or omissions from the plans and specifications, he may submit to the Engineering Department, a written request for an interpretation or correction thereof. The person submitting the request will be responsible for its prompt delivery. Questions received less than ninety-six (96) hours before the bid opening time may not be answered. Any interpretation or correction of the documents will be made only by Addendum, duly issued and a copy of such Addendum will be mailed or delivered to each person receiving a set of such documents. The City of Glendale will not be responsible for any other explanations or interpretations of the proposed documents.

12. CHANGES TO PLANS AND DOCUMENTS: Any changes to the plans and documents shall be made only by Addendum. No verbal or other changes to the plans and documents will be valid. A copy of each Addendum will be mailed or delivered as provided in Section 13 below.

13. ADDENDUM: Any addenda will be faxed, mailed or delivered to all who are known by the City to have received a complete set of bid documents, and to offices where bid documents have been filed for review purposes. It is the responsibility of each bidder to ascertain that he has received all addenda issued by telephoning the office identified in the NOTICE TO CONTRACTORS as the location where bid documents are available prior to submitting his bid.

Bidders shall acknowledge all addenda in the appropriate location on the "PROPOSAL" form. Failure to acknowledge receipt of Addenda shall render the bid proposal non-responsive and it will be rejected.

14. ASSIGNMENT OF CONTRACT: No assignment by the Contractor of any contract to be entered into hereunder, or any part thereof, or of funds to be received thereunder by the Contractor, will be recognized by the Owner by the Owner unless such assignment has had prior approval of the Owner, and the Surety has been given due notice of such assignment in writing and has consented

thereto in writing.

15. **PLANS AND SPECIFICATIONS TO SUCCESSFUL BIDDER:** The successful bidder may obtain five (5) sets of plans and specifications for this project from the City.

16. **TIME OF COMPLETION:** The Contractor shall commence work under this project on or before the tenth day following receipt of the Notice to Proceed for that project from the City of Glendale and shall fully complete all work under the project within NINETY (90) consecutive calendar days from and including the date of receipt of such Notice to Proceed. Time is of the essence in the completion of all work required under this contract. The Contractor shall, at all times, during the continuance of the contract, prosecute the work with such force and equipment as is sufficient to complete all work within the time specified.

17. **CITY OF GLENDALE TRANSACTION PRIVILEGE TAX:** The City of Glendale transaction privilege tax shall **NOT** be waived under the provisions of this contract. The current privilege tax rate can be obtained from the City of Glendale Sales Tax and Licenses Department. The Contractor shall be responsible for reporting and payment of all city, county, state or federal taxes.

18. **PRE-BID CONFERENCE:** A pre-bid conference will be held on JANUARY 30, 2013, at 2:00 P.M., in the Engineering Department Conference Room, 5850 West Glendale Avenue, Glendale, Arizona. Bidders, contractors, and other interested parties are invited to attend this conference which will be conducted by the Owner and Engineer to answer any questions.

19. **ALTERNATES:** Alternate proposals will not be considered unless called for in the documents or any addenda thereto. When alternates are requested, all requested alternates or alternate bid items, unless otherwise stated, shall be bid. If no change in the base bid will occur with the alternate, enter "No Change."

20. **APPROVAL OF SUBSTITUTIONS:** The materials, products and equipment described in the Documents and Addenda establish a standard or required function, dimension, appearance and quality to be met by any proposed substitution. No substitute will be considered, before bid opening, unless written request for approval has been received by the City Engineer at least ten (10) working days prior to the scheduled closing time for receipt of bids. Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including any drawings, cuts, performance and test data and any other information necessary for evaluation of the substitute. Bidder shall not be entitled to approval of a substitute.

If a substitute is approved, the approval shall be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.

21. **USE OF "EQUALS":** When the specifications for materials, articles, products and equipment state "or equal," contractor may bid upon, and use materials, articles, products and equipment which will perform equally the duties imposed by the general design. The City Engineering Department will have the final approval of all materials, articles, products and equipment proposed to be used as an "equal." It shall not be purchased or installed without the prior written approval from the City Engineering Department.

Approvals for "equals," before bid opening, may be requested in writing to the City Engineering

Department for approval. Requests must be received at least ten (10) days prior to the date set for opening the Bid Proposals. The request shall state the name of the material, article, product or equipment for which the item is sought to be considered an equal and a complete description of the proposed equal including any drawings, cuts, performance and test data and any other information necessary for approval of the equal. All approvals will be issued in the form of an addendum.

22. EXAMINATION OF CONTRACT DOCUMENTS AND VISIT SITE: Before submitting a Bid Proposal, bidders should carefully examine the Contract Documents, visit the site of the work, fully inform themselves as to all existing conditions and limitations. No consideration will be granted for any alleged misunderstanding of the material, articles or piece of equipment to be furnished or work to be done. It is understood that the tender of the Bid Proposal carries with it the agreement to all items and conditions referred to herein or indicated in the Contract Documents.

23. BIDDERS IN DEFAULT: No bid will be awarded to any person, firm or corporation that is not authorized by the Arizona Corporation Commission to do business in the State of Arizona, in arrears or is in default to the City of Glendale upon any debt or contract, or that is a defaulter as surety or otherwise upon any obligation to the City of Glendale, or has failed to faithfully perform any previous contract with the City of Glendale.

\*\*\*END OF INFORMATION FOR BIDDERS\*\*\*

PROPOSAL

Place City of Glendale

Date February 19, 2013

Proposal of Southwest Slurry Seal a Corporation organized and existing under the laws of  
Inc.  
the State of Arizona. a ~~partnership consisting of~~ \_\_\_\_\_; or an  
~~individual trading as~~ \_\_\_\_\_.

TO THE HONORABLE MAYOR AND COUNCIL  
CITY OF GLENDALE  
GLENDALE, ARIZONA

Gentlemen:

The undersigned hereby proposes and agrees to furnish any and all required labor, materials, construction equipment, transportation and services for the construction of: **PROJECT 121312 - 2012/2013 SLURRY SEAL PROGRAM**, in strict conformity with the plans and specifications for the following unit prices:

(Extension of these unit prices on the basis of estimated quantities and the totaling of these extensions are for the purpose of comparing bids only. The mathematics of such extensions and totaling will be checked and corrected by the Engineering Department, before evaluating the bids, and the lowest of such corrected and checked totals will determine the lowest bids.)

**BID ITEM SUMMARY**

Base Bid

Revised 2/6/13 (Addendum #2)

BID ITEM #	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL BID
1	Mobilization / Demobilization	1	LS	\$19,650.00	\$19,650.00
2	Construction Material Sampling & Testing	1	LS	\$7856.00	\$7856.00
3	Asphalt Repair (Remove/Replace), 12.5mm - Min. 3" Depth All Locations	2,392	SY	\$51.58	\$123,379.36
4	Adjust Existing Valve Box & Cover, MAG Std. Det. 391-1, Type A	2	EA	\$360.00	\$720.00
5	Adjust Existing Manhole Frame & Cover, MAG Std. Det. 422	5	EA	\$395.00	\$1,975.00
6	Adjust Existing SWG Valve Box & Cover	6	EA	\$360.00	\$2,160.00
7	Crack Seal	904,244	LF	\$0.25	\$226,061.00
8	Single Slurry Seal	378,028	SY	\$1.36	\$514,118.08
9	Double Slurry Seal	31,844	SY	\$2.81	\$89,481.64
10	Microseal (Type III)	7,294	SY	\$3.52	\$25,674.88
11	Traffic Control	1	LS	\$71,700.00	\$71,700.00
12	Uniformed, Off-duty Law Enforcement Officer	200	HR	50.00	\$10,000.00
13	Allowance for Construction Contingencies	1	LS	\$68,000.00	\$68,000.00
<b>TOTAL CONSTRUCTION BID:</b>					<b>\$1,160,775.32</b>

The undersigned hereby declares that he has visited the site(s) and has carefully examined the contract documents relating to the work covered by the above bid or bids.

Upon receipt of notice of the acceptance of this bid, we will execute the formal contract attached within ten (10) days, and will deliver a one hundred percent (100%) Performance Bond for the faithful performance of this Contract, together with a one hundred percent (100%) Payment Bond and Certificate of Insurance.

The bid security attached, with endorsement, in the sum of ten percent (10%) of the total bid, is to become the property of the City of Glendale, Arizona, in the event the Contract and Bonds are not executed within the time set forth, as liquidated damages for the delay and additional work caused thereby.

The undersigned has checked carefully all the above figures and understands that the City of Glendale, Arizona, will not be responsible for any errors or omissions on the part of the undersigned in making up this bid.

The undersigned understands that the Mayor and Council of the City of Glendale, Arizona, reserves the right to reject any or all bids or to waive any informalities or irregularities in the bid.

Respectfully submitted,

Arizona Contractor's  
Classification and  
License No.

ROC081093 A

Southwest Slurry Seal, Inc.

Contractor

By

  
Richard Francis, President

22855 N. 21st Avenue

Phoenix, AZ 85027

(Complete business address)

Telephone Number: 623-582-1919

Fax Number 623-434-8805

Bidder shall signify receipt of all Addenda here (if any):

1, 2, 3, 4

Failure to acknowledge receipt of all Addenda shall render the bid proposal non-responsive and will be rejected.

Acknowledged by

  
Richard Francis

**CONSTRUCTION AGREEMENT**

This Construction Agreement ("Agreement") is entered into and effective between the CITY OF GLENDALE, an Arizona municipal corporation ("City"), and Southwest Slurry Seal, Inc., an Arizona corporation ("Contractor") as of the 26 day of March, 2013

**RECITALS**

- A. City intends to undertake a project for the benefit of the public and with public funds that is more fully set forth in the **Notice to Contractors** and the attached **Exhibit A** ("Project");
- B. City desires to retain the services of Contractor to perform those specific duties and produce the specific work as set forth in the Project, the plans and specifications, the **Information for Bidders**, and the **Maricopa Association of Governments ("MAG") General and Supplemental Conditions and Provisions**;
- C. City and Contractor desire to memorialize their agreement with this document.

**AGREEMENT**

In consideration of the Recitals, which are confirmed as true and correct and incorporated by this reference, the mutual promises and covenants contained in this Agreement, and other good and valuable consideration, City and Contractor agree as follows:

**1. Project.**

**1.1 Scope.** Contractor will provide all services and material necessary to assure the Project is completed timely and efficiently consistent with Project requirements, including, but not limited to, working in close interaction and interfacing with City and its designated employees, and working closely with others, including other contractors, providers or consultants retained by City.

**1.2 Documents.** The following documents are, by this reference, entirely incorporated into this Agreement and attached Exhibits as though fully set forth herein:

- (A) Notice to Contractors;
- (B) Information for Bidders;
- (C) MAG General Conditions, Supplemental General Conditions, Special and Technical Provisions;
- (D) Proposal;
- (E) Bid Bond;
- (F) Payment Bond;
- (G) Performance Bond;
- (H) Certificate of Insurance;
- (I) Appendix; and
- (J) Plans and Addenda thereto.

Should a conflict exist between this Agreement (and its attachments), and any of the incorporated documents as listed above, the provisions of this Agreement shall govern.

**1.3 Project Team.**

(A) Project Manager. Contractor will designate an employee as Project Manager with sufficient training, knowledge, and experience to, in the City's opinion, to complete the project and handle all aspects of the Project such that the work produced by Contractor is consistent with applicable standards as detailed in this Agreement.

(B) Project Team.

- (1) The Project manager and all other employees assigned to the project by Contractor will comprise the "Project Team."
- (2) Project Manager will have responsibility for and will supervise all other employees assigned to the project by Contractor.

(C) Sub-contractors.

- (1) Contractor may engage specific technical contractor (each a "Sub-contractor") to furnish certain service functions.
- (2) Contractor will remain fully responsible for Sub-contractor's services.
- (3) Sub-contractors must be approved by the City, unless the Sub-contractor was previously mentioned in the response to the solicitation.
- (4) Contractor shall certify by letter that contracts with Sub-contractors have been executed incorporating requirements and standards as set forth in this Agreement.

2. **Schedule.** The Project will be undertaken in a manner that ensures it is completed in a timely and efficient manner. If not otherwise stated in **Exhibit A**, the Project shall be completed by no later than within ninety (90) consecutive calendar days from and including the date of receipt of the Notice to Proceed.

3. **Contractor's Work.**

3.1 **Standard.** Contractor must perform services in accordance with the standards of due diligence, care, and quality prevailing among contractors having substantial experience with the successful furnishing of services and materials for projects that are equivalent in size, scope, quality, and other criteria under the Project and identified in this Agreement.

3.2 **Licensing.** Contractor warrants that:

- (A) Contractor and Sub-contractors will hold all appropriate and required licenses, registrations and other approvals necessary for the lawful furnishing of services ("Approvals"); and
- (B) Neither Contractor nor any Sub-contractor has been debarred or otherwise legally excluded from contracting with any federal, state, or local governmental entity ("Debarment").
  - (1) City is under no obligation to ascertain or confirm the existence or issuance of any Approvals or Debarments or to examine Contractor's contracting ability.
  - (2) Contractor must notify City immediately if any Approvals or Debarment changes during the Agreement's duration and the failure of the Contractor to notify City as required will constitute a material default of this Agreement.

3.3 **Compliance.** Services and materials will be furnished in compliance with applicable federal, state, county and local statutes, rules, regulations, ordinances, building codes, life safety codes, or other standards and criteria designated by City.

3.4 **Coordination; Interaction.**

- (A) If the City determines that the Project requires the coordination of professional services or other providers, Contractor will work in close consultation with City to proactively interact with any other contractors retained by City on the Project ("Coordinating Entities").
- (B) Subject to any limitations expressly stated in the budget, Contractor will meet to review the Project, schedules, budget, and in-progress work with Coordinating Entities and the City as often and for durations as City reasonably considers necessary in order to ensure the timely work delivery and Project completion.
- (C) If the Project does not involve Coordinating Entities, Contractor will proactively interact with any other contractors when directed by City to obtain or disseminate timely information for the proper execution of the Project.

3.5 **Hazardous Substances.** Contractor is responsible for the appropriate handling, disposal of, and if necessary, any remediation and all losses and damages to the City, associated with the use or release of hazardous substances by Contractor in connection with completion of the Project.

## Project 121312

**3.6 Warranties.** At any time within two years after completion of the Project, Contractor must, at Contractor's sole expense and within 20 days of written notice from the City, uncover, correct and remedy all defects in Contractor's work. City will accept a manufacturer's warranty on approved equipment as satisfaction of the Contractor's warranty under this subsection.

**3.7 Bonds.** Upon execution of this Agreement, and if applicable, Contractor must furnish Payment and Performance bonds as required under A.R.S. § 34-608.

### **4. Compensation for the Project.**

**4.1 Compensation.** Contractor's compensation for the Project, including those furnished by its Sub-contractors will not exceed \$1,601,775.32, as specifically detailed in the Contractor's bid and set forth in **Exhibit B** ("Compensation").

**4.2 Change in Scope of Project.** The Compensation may be equitably adjusted if the originally contemplated scope of services as outlined in the Project is significantly modified by the City.

(A) Adjustments to the Scope or Compensation require a written amendment to this Agreement and may require City Council approval.

(B) Additional services which are outside the scope of the Project and not contained in this Agreement may not be performed by the Contractor without prior written authorization from the City.

### **5. Billings and Payment.**

#### **5.1 Applications.**

(A) The Contractor will submit monthly invoices (each, a "Payment Application") to City's Project Manager and City will remit payments based upon the Payment Application as stated below.

(B) The period covered by each Payment Application will be one calendar month ending on the last day of the month.

#### **5.2 Payment.**

(A) After a full and complete Payment Application is received, City will process and remit payment within 30 days.

(B) Payment may be subject to or conditioned upon City's receipt of:

(1) Completed work generated by Contractor and its Sub-contractors; and

(2) Unconditional waivers and releases on final payment from Sub-contractors as City may reasonably request to assure the Project will be free of claims arising from required performances under this Agreement.

#### **5.3 Review and Withholding.** City's Project Manager will timely review and certify Payment Applications.

(A) If the Payment Application is rejected, the Project Manager will issue a written listing of the items not approved for payment.

(B) City may withhold an amount sufficient to pay expenses that City reasonably expects to incur in correcting the deficiency or deficiencies rejected for payment.

(C) Contractor will provide, by separate cover, and concurrent with the execution of this Agreement, all required financial information to the City, including City of Glendale Transaction Privilege License and Federal Taxpayer identification numbers.

(D) City will temporarily withhold Compensation amounts as required by A.R.S. 34-221(C).

**6. Termination.**

**6.1 For Convenience.** City may terminate this Agreement for convenience, without cause, by delivering a written termination notice stating the effective termination date, which may not be less than 15 days following the date of delivery.

- (A) Contractor will be equitably compensated any services and materials furnished prior to receipt of the termination notice and for reasonable costs incurred.
- (B) Contractor will also be similarly compensated for any approved effort expended and approved costs incurred that are directly associated with Project closeout and delivery of the required items to the City.

**6.2 For Cause.** City may terminate this Agreement for cause if Contractor fails to cure any breach of this Agreement within seven days after receipt of written notice specifying the breach.

- (A) Contractor will not be entitled to further payment until after City has determined its damages. If City's damages resulting from the breach, as determined by City, are less than the equitable amount due but not paid Contractor for Service and Repair furnished, City will pay the amount due to Contractor, less City's damages.
- (B) If City's direct damages exceed amounts otherwise due to Contractor, Contractor must pay the difference to City immediately upon demand; however, Contractor will not be subject to consequential damages more than \$1,000,000 or the amount of this Agreement, whichever is greater.

**7. Insurance.**

**7.1 Requirements.** Contractor must obtain and maintain the following insurance ("Required Insurance"):

- (A) Contractor and Sub-contractors. Contractor, and each Sub-contractor performing work or providing materials related to this Agreement must procure and maintain the insurance coverages described below (collectively, "Contractor's Policies"), until each Parties' obligations under this Agreement are completed.
- (B) General Liability.
  - (1) Contractor must at all times relevant hereto carry a commercial general liability policy with a combined single limit of at least \$1,000,000 per occurrence and \$2,000,000 annual aggregate.
  - (2) Sub-contractors must at all times relevant hereto carry a general commercial liability policy with a combined single limit of at least \$1,000,000 per occurrence.
  - (3) This commercial general liability insurance must include independent contractors' liability, contractual liability, broad form property coverage, products and completed operations, XCU hazards if requested by the City, and a separation of insurance provision.
  - (4) These limits may be met through a combination of primary and excess liability coverage.
- (C) Auto. A business auto policy providing a liability limit of at least \$1,000,000 per accident for Contractor and 1,000,000 per accident for Sub-contractors and covering owned, non-owned and hired automobiles.
- (D) Workers' Compensation and Employer's Liability. A workers' compensation and employer's liability policy providing at least the minimum benefits required by Arizona law.
- (E) Equipment Insurance. Contractor must secure, pay for, and maintain all-risk insurance as necessary to protect the City against loss of owned, non-owned, rented or leased capital equipment and tools, equipment and scaffolding, staging, towers and forms owned or rented by Contractor or its Sub-contractors.

- (F) Notice of Changes. Contractor's Policies must provide for not less than 30 days' advance written notice to City Representative of:
  - (1) Cancellation or termination of Contractor or Sub-contractor's Policies;
  - (2) Reduction of the coverage limits of any of Contractor or and Sub-contractor's Policies; and
  - (3) Any other material modification of Contractor or Sub-contractor's Policies related to this Agreement.
  
- (G) Certificates of Insurance.
  - (1) Within 10 business days after the execution of the Agreement, Contractor must deliver to City Representative certificates of insurance for each of Contractor and Sub-contractor's Policies, which will confirm the existence or issuance of Contractor and Sub-contractor's Policies in accordance with the provisions of this section, and copies of the endorsements of Contractor and Sub-contractor's Policies in accordance with the provisions of this section.
  - (2) City is and will be under no obligation either to ascertain or confirm the existence or issuance of Contractor and Sub-contractor's Policies, or to examine Contractor and Sub-contractor's Policies, or to inform Contractor or Sub-contractor in the event that any coverage does not comply with the requirements of this section.
  - (3) Contractor's failure to secure and maintain Contractor Policies and to assure Sub-contractor policies as required will constitute a material default under this Agreement.
  
- (H) Other Contractors or Vendors.
  - (1) Other contractors or vendors that may be contracted by Contractor with in connection with the Project must procure and maintain insurance coverage as is appropriate to their particular agreement.
  - (2) This insurance coverage must comply with the requirements set forth above for Contractor's Policies (e.g., the requirements pertaining to endorsements to name the parties as additional insured parties and certificates of insurance).
  
- (I) Policies. Except with respect to workers' compensation and employer's liability coverages, the City must be named and properly endorsed as additional insureds on all liability policies required by this section.
  - (1) The coverage extended to additional insureds must be primary and must not contribute with any insurance or self insurance policies or programs maintained by the additional insureds.
  - (2) All insurance policies obtained pursuant to this section must be with companies legally authorized to do business in the State of Arizona and acceptable to all parties.

**7.2 Sub-contractors.**

- (A) Contractor must also cause its Sub-contractors to obtain and maintain the Required Insurance.
- (B) City may consider waiving these insurance requirements for a specific Sub-contractor if City is satisfied the amounts required are not commercially available to the Sub-contractor and the insurance the Sub-contractor does have is appropriate for the Sub-contractor's work under this Agreement.
- (C) Contractor and Sub-contractors must provide to the City proof of Required Insurance whenever requested.

**7.3 Indemnification.**

- (A) To the fullest extent permitted by law, Contractor must defend, indemnify, and hold harmless City and its elected officials, officers, employees and agents (each, an "Indemnified Party," collectively, the

"Indemnified Parties"), for, from, and against any and all claims, demands, actions, damages, judgments, settlements, personal injury (including sickness, disease, death, and bodily harm), property damage (including loss of use), infringement, governmental action and all other losses and expenses, including attorneys' fees and litigation expenses (each, a "Demand or Expense"; collectively, "Demands or Expenses") asserted by a third-party (i.e. a person or entity other than City or Contractor) and that arises out of or results from the breach of this Agreement by the Contractor or the Contractor's negligent actions, errors or omissions (including any Sub-contractor or other person or firm employed by Contractor), whether sustained before or after completion of the Project.

- (B) This indemnity and hold harmless policy applies even if a Demand or Expense is in part due to the Indemnified Party's negligence or breach of a responsibility under this Agreement, but in that event, Contractor shall be liable only to the extent the Demand or Expense results from the negligence or breach of a responsibility of Contractor or of any person or entity for whom Contractor is responsible.
- (C) Contractor is not required to indemnify any Indemnified Parties for, from, or against any Demand or Expense resulting from the Indemnified Party's sole negligence or other fault solely attributable to the Indemnified Party.

7.4 **Waiver of Subrogation.** Contractor waives, and will require any Subcontractor to waive, all rights of subrogation against the City to the extent of all losses or damages covered by any policy of insurance.

8. **Immigration Law Compliance.**

- 8.1 Contractor, and on behalf any subcontractor, warrants, to the extent applicable under A.R.S. § 41-4401, compliance with all federal immigration laws and regulations that relate to their employees as well as compliance with A.R.S. § 23-214(A) which requires registration and participation with the E-Verify Program.
- 8.2 Any breach of warranty under subsection 8.1 above is considered a material breach of this Agreement and is subject to penalties up to and including termination of this Agreement.
- 8.3 City retains the legal right to inspect the papers of any Contractor or subcontractor employee who performs work under this Agreement to ensure that the Contractor or any subcontractor is compliant with the warranty under subsection 8.1 above.
- 8.4 City may conduct random inspections, and upon request of City, Contractor shall provide copies of papers and records of Contractor demonstrating continued compliance with the warranty under subsection 8.1 above. Contractor agrees to keep papers and records available for inspection by the City during normal business hours and will cooperate with City in exercise of its statutory duties and not deny access to its business premises or applicable papers or records for the purposes of enforcement of this section 8.
- 8.5 Contractor agrees to incorporate into any subcontracts under this Agreement the same obligations imposed upon Contractor and expressly accrue those obligations directly to the benefit of the City. Contractor also agrees to require any subcontractor to incorporate into each of its own subcontracts under this Agreement the same obligations above and expressly accrue those obligations to the benefit of the City.
- 8.6 Contractor's warranty and obligations under this section to the City is continuing throughout the term of this Agreement or until such time as the City determines, in its sole discretion, that Arizona law has been modified in that compliance with this section is no longer a requirement.
- 8.7 The "E-Verify Program" above means the employment verification program administered by the United States Department of Homeland Security, the Social Security Administration, or any successor program.

9. **Conflict.** Contractor acknowledges this Agreement is subject to A.R.S. § 38-511, which allows for cancellation of this Agreement in the event any person who is significantly involved in initiating, negotiating, securing, drafting, or creating the Agreement on City's behalf is also an employee, agent, or consultant of any other party to this Agreement.

10. **Prohibitions.** Contractor certifies under A.R.S. §§ 35-391 *et seq.* and 35-393 *et seq.*, that it does not have, and during the term of this Agreement will not have "scrutinized" business operations, as defined in the preceding statutes, in the countries of Sudan or Iran.

11. **Non-Discrimination Policies.** Contractor must not discriminate against any employee or applicant for employment on

Project 121312

the basis of race, religion, color sex or national origin. Contractor must develop, implement and maintain non-discrimination policies and post the policies in conspicuous places visible to employees and applicants for employment. Contractor will require any Sub-contractor to be bound to the same requirements as stated within this section.

12. Notices.

12.1 A notice, request or other communication that is required or permitted under this Agreement (each a "Notice") will be effective only if:

- (A) The Notice is in writing, and
- (B) Delivered in person or by private express overnight delivery service (delivery charges prepaid), certified or registered mail (return receipt requested).
- (C) Notice will be deemed to have been delivered to the person to whom it is addressed as of the date of receipt, if:
  - (1) Received on a business day, or before 5:00 p.m., at the address for Notices identified for the Party in this Agreement by U.S. Mail, hand delivery, or overnight courier on or before 5:00 p.m.; or
  - (2) As of the next business day after receipt, if received after 5:00 p.m.
- (D) The burden of proof of the place and time of delivery is upon the Party giving the Notice.
- (E) Digitalized signatures and copies of signatures will have the same effect as original signatures.

12.2 Representatives.

(A) Contractor. Contractor's representative ("Contractor's Representative") authorized to act on Contractor's behalf with respect to the Project, and his or her address for Notice delivery is:

Southwest Slurry Seal, Inc.  
Attn: Richard Francis  
22855 North 21<sup>st</sup> Avenue  
Phoenix, AZ 85027

(B) City. City's representative ("City's Representative") authorized to act on City's behalf, and his or her address for Notice delivery is:

City of Glendale  
Attn: Jim McMains  
5850 West Glendale Avenue  
Glendale, Arizona 85301

With required copies to:

City of Glendale  
City Manager  
5850 West Glendale Avenue  
Glendale, Arizona 85301

City of Glendale  
City Attorney  
5850 West Glendale Avenue  
Glendale, Arizona 85301

(C) Concurrent Notices.

- (1) All notices to City's representative must be given concurrently to City Manager and City Attorney.
- (2) A notice will not be considered to have been received by City's representative until the time that it has also been received by City Manager and City Attorney.
- (3) City may appoint one or more designees for the purpose of receiving notice by delivery of a

written notice to Contractor identifying the designee(s) and their respective addresses for notices.

- (D) **Changes.** Contractor or City may change its representative or information on Notice, by giving Notice of the change in accordance with this section at least ten days prior to the change.

13. **Financing Assignment.** City may assign this Agreement to any City-affiliated entity, including a non-profit corporation or other entity whose primary purpose is to own or manage the Project.

14. **Entire Agreement; Survival; Counterparts; Signatures.**

14.1 **Integration.** This Agreement contains, except as stated below, the entire agreement between City and Contractor and supersedes all prior conversations and negotiations between the parties regarding the Project or this Agreement.

- (A) Neither Party has made any representations, warranties or agreements as to any matters concerning the Agreement's subject matter.
- (B) Representations, statements, conditions, or warranties not contained in this Agreement will not be binding on the parties.
- (C) Any solicitation, addendums and responses submitted by the Contractor are incorporated fully into this Agreement as Exhibit A. Any inconsistency between Exhibit A and this Agreement will be resolved by the terms and conditions stated in this Agreement.

14.2 **Interpretation.**

- (A) The parties fairly negotiated the Agreement's provisions to the extent they believed necessary and with the legal representation they deemed appropriate.
- (B) The parties are of equal bargaining position and this Agreement must be construed equally between the parties without consideration of which of the parties may have drafted this Agreement.
- (C) The Agreement will be interpreted in accordance with the laws of the State of Arizona.

14.3 **Survival.** Except as specifically provided otherwise in this Agreement each warranty, representation, indemnification and hold harmless provision, insurance requirement, and every other right, remedy and responsibility of a Party, will survive completion of the Project, or the earlier termination of this Agreement.

14.4 **Amendment.** No amendment to this Agreement will be binding unless in writing and executed by the parties. Any amendment may be subject to City Council approval.

14.5 **Remedies.** All rights and remedies provided in this Agreement are cumulative and the exercise of any one or more right or remedy will not affect any other rights or remedies under this Agreement or applicable law.

14.6 **Severability.** If any provision of this Agreement is voided or found unenforceable, that determination will not affect the validity of the other provisions, and the voided or unenforceable provision will be reformed to conform to applicable law.

14.7 **Counterparts.** This Agreement may be executed in counterparts, and all counterparts will together comprise one instrument.

15. **Dispute Resolution.** Each claim, controversy and dispute ("Dispute") between Contractor and City will be resolved in accordance with Exhibit C. The final determination will be made by the City.

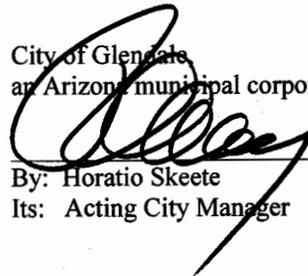
16. **Exhibits.** The following exhibits, with reference to the term in which they are first referenced, are incorporated by this reference.

Exhibit A	Project
Exhibit B	Compensation
Exhibit C	Dispute Resolution

Project 121312

The parties enter into this Agreement as of the date shown above.

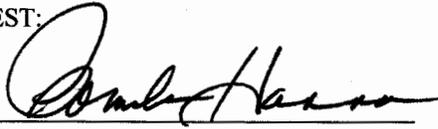
City of Glendale  
an Arizona municipal corporation



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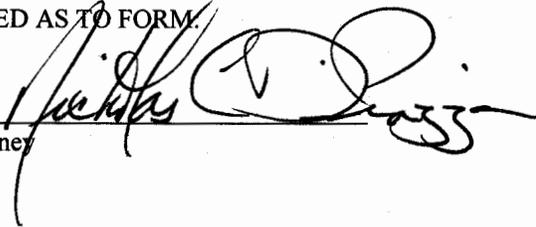
By: Horatio Skeete  
Its: Acting City Manager

ATTEST:



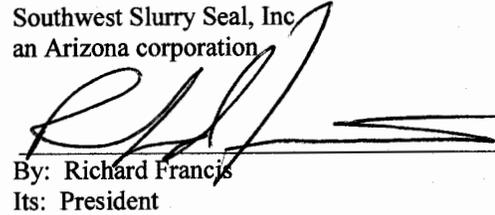
City Clerk (SEAL)

APPROVED AS TO FORM:



City Attorney

Southwest Slurry Seal, Inc  
an Arizona corporation



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By: Richard Francis  
Its: President

WOMEN-OWNED/MINORITY BUSINESS [ ] YES [X] NO  
CITY OF GLENDALE TRANSACTION PRIVILEGE TAX NO. 100002074  
FEDERAL TAXPAYER IDENTIFICATION NO. 86-0415204

Project 121312

**EXHIBIT A  
CONSTRUCTION AGREEMENT**

**PROJECT**

This project will replace damaged asphalt, provide crack sealing, as well as single / double slurry seal applications on various roadways within the City of Glendale. Additional items of work may include striping & marking.

Project 121312

**EXHIBIT B**

**CONSTRUCTION AGREEMENT**

**COMPENSATION**

**METHOD AND AMOUNT OF COMPENSATION**

By bid, including all services, materials and costs.

**NOT-TO-EXCEED AMOUNT**

The total amount of compensation paid to Contractor for full completion of all work required by the Project during the entire term of the Project must not exceed \$1,160,775.32.

**DETAILED PROJECT COMPENSATION**

As shown on Page 8 of the Bid Item Summary .

**EXHIBIT C  
CONSTRUCTION AGREEMENT**

**DISPUTE RESOLUTION**

**1. Disputes.**

- 1.1 Commitment. The parties commit to resolving all disputes promptly, equitably, and in a good-faith, cost-effective manner.
- 1.2 Application. The provisions of this Exhibit will be used by the parties to resolve all controversies, claims, or disputes ("Dispute") arising out of or related to this Agreement-including Disputes regarding any alleged breaches of this Agreement.
- 1.3 Initiation. A party may initiate a Dispute by delivery of written notice of the Dispute, including the specifics of the Dispute, to the Representative of the other party as required in this Agreement.
- 1.4 Informal Resolution. When a Dispute notice is given, the parties will designate a member of their senior management who will be authorized to expeditiously resolve the Dispute.
  - (A) The parties will provide each other with reasonable access during normal business hours to any and all non-privileged records, information and data pertaining to any Dispute in order to assist in resolving the Dispute as expeditiously and cost effectively as possible;
  - (B) The parties' senior managers will meet within 10 business days to discuss and attempt to resolve the Dispute promptly, equitably, and in a good faith manner, and
  - (C) The Senior Managers will agree to subsequent meetings if both parties agree that further meetings are necessary to reach a resolution of the Dispute.

**2. Arbitration.**

- 2.1 Rules. If the parties are unable to resolve the Dispute by negotiation within 30 days from the Dispute notice, and unless otherwise informal discussions are extended by the mutual agreement, the Dispute will be decided by binding arbitration in accordance with Construction Industry Rules of the AAA, as amended herein. Although the arbitration will be conducted in accordance with AAA Rules, it will not be administered by the AAA, but will be heard independently.
  - (A) The parties will exercise best efforts to select an arbitrator within 5 business days after agreement for arbitration. If the parties have not agreed upon an arbitrator within this period, the parties will submit the selection of the arbitrator to one of the principals of the mediation firm of Scott & Skelly, LLC, who will then select the arbitrator. The parties will equally share the fees and costs incurred in the selection of the arbitrator.
  - (B) The arbitrator selected must be an attorney with at least 15 years experience with commercial construction legal matters in Maricopa County, Arizona, be independent, impartial, and not have engaged in any business for or adverse to either Party for at least 10 years.
- 2.2 Discovery. The extent and the time set for discovery will be as determined by the arbitrator. Each Party must, however, within ten (10) days of selection of an arbitrator deliver to the other Party copies of all documents in the delivering party's possession that are relevant to the dispute.
- 2.3 Hearing. The arbitration hearing will be held within 90 days of the appointment of the arbitrator. The arbitration hearing, all proceedings, and all discovery will be conducted in Glendale, Arizona unless otherwise agreed by the parties or required as a result of witness location. Telephonic hearings and other reasonable arrangements may be used to minimize costs.
- 2.4 Award. At the arbitration hearing, each Party will submit its position to the arbitrator, evidence to support that position, and the exact award sought in this matter with specificity. The arbitrator must select the award sought

Project 121312

by one of the parties as the final judgment and may not independently alter or modify the awards sought by the parties, fashion any remedy, or make any equitable order. The arbitrator has no authority to consider or award punitive damages.

2.5 Final Decision. The Arbitrator's decision should be rendered within 15 days after the arbitration hearing is concluded. This decision will be final and binding on the Parties.

2.6 Costs. The prevailing party may enter the arbitration in any court having jurisdiction in order to convert it to a judgment. The non-prevailing party shall pay all of the prevailing party's arbitration costs and expenses, including reasonable attorney's fees and costs.

3. **Services to Continue Pending Dispute.** Unless otherwise agreed to in writing, Contractor must continue to perform and maintain progress of required services during any Dispute resolution or arbitration proceedings, and City will continue to make payment to Contractor in accordance with this Agreement.

4. **Exceptions.**

4.1 Third Party Claims. City and Contractor are not required to arbitrate any third-party claim, cross-claim, counter claim, or other claim or defense of a third-party who is not obligated by contract to arbitrate disputes with City and Contractor.

4.2 Liens. City or Contractor may commence and prosecute a civil action to contest a lien or stop notice, or enforce any lien or stop notice, but only to the extent the lien or stop notice the Party seeks to enforce is enforceable under Arizona Law, including, without limitation, an action under A.R.S. § 33-420, without the necessity of initiating or exhausting the procedures of this Exhibit.

4.3 Governmental Actions. This Exhibit does not apply to, and must not be construed to require arbitration of, any claims, actions or other process filed or issued by City of Glendale Building Safety Department or any other agency of City acting in its governmental permitting or other regulatory capacity.

**INDIVIDUAL SURETIES WILL NOT BE ACCEPTED**  
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:

\*\*Merchants Bonding  
Company (Mutual)

That Southwest Slurry Seal, Inc. (hereinafter called the Principal), as Principal, and  
, a corporation organized and existing under the laws of the State of Iowa with its principal office in the  
City of Des Moines, (hereinafter called the Surety), as Surety, are held and firmly bound unto the City of  
Glendale, a municipal corporation, (hereinafter called the Oblige), in the amount of  
One Million, Six Hundred One Thousand, Seven Hundred Seventy Seven and 32/100 Dollars (\$ 1,601,775.32), for the  
payment whereof, the said Principal and Surety bind themselves, and their heirs, administrators, successors and  
assigns, jointly and severally, firmly by these presents.

WHEREAS, The Principal has entered into a certain written contract with the Oblige, dated the \_\_\_ day of  
, 20\_\_\_, to construct **PROJECT 121312 - 2012/2013 SLURRY SEAL PROGRAM**, 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 undertakings, covenants, terms, conditions and agreements of said contract  
during the original term of said contract 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.

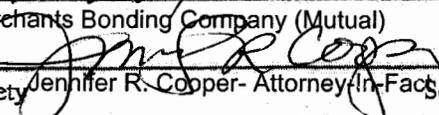
PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Title 34, Chapter 2, Article  
2, of the Arizona Revised Statutes, and all liabilities on this bond shall be determined in accordance with the  
provisions of said Title, Chapter, and Article, to the extent as if it were copied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

The prevailing party or any party which recovers judgment on this bond shall be entitled to such reasonable  
attorney's fees as may be fixed by the court or a judge thereof.

Witness our hands this 3 day of April, 20 13.

Southwest Slurry Seal, Inc.  
Principal Seal

By   
Merchants Bonding Company (Mutual)

  
Surety Jennifer R. Copper - Attorney In-Fact Seal

Commercial West Insurance Agency  
Agency of Record

1225 W Houston Ave., Ste 101 Gilbert, AZ 85233  
Agency Address

Telephone Number: 480-961-5400

**INDIVIDUAL SURETIES WILL NOT BE ACCEPTED**  
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:

\*\*Merchants Bonding  
Company (Mutual)

That, Southwest Slurry Seal, Inc. (hereinafter called the Principal), as Principal, and \*\*, a corporation organized and existing under the laws of the State of Iowa with its principal office in the City of Des Moines, (hereinafter called the Surety), as Surety, are held and firmly bound unto the City of Glendale, a municipal corporation, (hereinafter called the Obligee), in the amount of \*\*\* Dollars (\$ 1,601,775.32 ), for the payment whereof; the said Principal and Surety bind themselves, and their heirs, administrators, successors and assigns, jointly and severally, firmly by these presents. \*\*\* One Million Six Hundred One Thousand, Seven Hundred Seventy Five Thousand & 32/100Ths

WHEREAS, The Principal has entered into a certain written contract with the Obligee, dated the day of \_\_\_\_\_, 20\_\_\_\_, to construct **PROJECT 121312 - 2012/2013 SLURRY SEAL PROGRAM** 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 promptly pay all monies due to all persons supplying labor or materials to him or his subcontractors in the prosecution of the work provided for in said Contract, then this obligation shall be void, otherwise to remain in full force and effect.

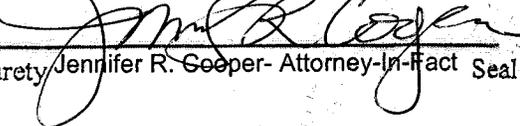
PROVIDED, HOWEVER, that this bond having been required of the said Principal in order to comply with the provisions of Title 34, Chapter 2, Article 2, of the Arizona Revised Statutes, all rights and remedies on this bond shall inure solely to such persons and shall be determined in accordance with the provisions, conditions, and limitations of said Title, Chapter and Article, to the same extent as if they were copied at length herein.

The prevailing party or any party which recovers judgment on this bond shall be entitled to such reasonable attorney's fees as may be fixed by the court or a judge thereof.

Witness our hands this 3rd day of April, 2013.

Principal Southwest Slurry Seal, Inc. Seal

By   
Merchants Bonding Company (Mutual)

  
Surety Jennifer R. Cooper- Attorney-In-Fact Seal

Commercial West Insurance Agency  
Agency of Record

Agency Address

1225 W Houston Ave., Ste 101 Gilbert, AZ 85233  
Telephone 480-961-5400

**MERCHANTS**  
**BONDING COMPANY**  
**POWER OF ATTORNEY**

Know All Persons By These Presents, that the MERCHANTS BONDING COMPANY (MUTUAL), a corporation duly organized under the laws of the State of Iowa, and having its principal office in the City of Des Moines, County of Polk, State of Iowa, hath made, constituted and appointed, and does by these presents make, constitute and appoint

Jennifer R. Cooper, Richard D. Dawn, Jacob H. Grover, Tracy A. Miller,  
John D. Norbut, Pamela L. Schlesinger, Jeffery L. Steed

of Gilbert and State of Arizona its true and lawful Attorney-in-Fact, with full power and authority hereby conferred in its name, place and stead, to sign, execute, acknowledge and deliver in its behalf as surety any and all bonds, undertakings, recognizances or other written obligations in the nature thereof, subject to the limitation that any such instrument shall not exceed the amount of:

**EIGHT MILLION (\$8,000,000.00) DOLLARS**

and to bind the MERCHANTS BONDING COMPANY (MUTUAL) thereby as fully and to the same extent as if such bond or undertaking was signed by the duly authorized officers of the MERCHANTS BONDING COMPANY (MUTUAL), and all the acts of said Attorney-in-Fact, pursuant to the authority herein given, are hereby ratified and confirmed.

This Power-of-Attorney is made and executed pursuant to and by authority of the following Amended Substituted and Restated By-Laws adopted by the Board of Directors of the MERCHANTS BONDING COMPANY (MUTUAL) on November 16, 2002.

ARTICLE II, SECTION 8 - The Chairman of the Board or President or any Vice President or Secretary shall have power and authority to appoint Attorneys-in-Fact, and to authorize them to execute on behalf of the Company, and attach the Seal of the Company thereto, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof.

ARTICLE II, SECTION 9 - The signature of any authorized officer and the Seal of the Company may be affixed by facsimile to any Power of Attorney or Certification thereof authorizing the execution and delivery of any bond, undertaking, recognizance, or other suretyship obligations of the Company, and such signature and seal when so used shall have the same force and effect as though manually fixed.

In Witness Whereof, MERCHANTS BONDING COMPANY (MUTUAL) has caused these presents to be signed by its President and its corporate seal to be hereto affixed, this 18th day of March, 2011.



MERCHANTS BONDING COMPANY (MUTUAL)

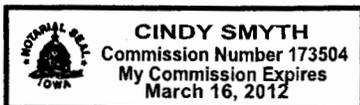
By

*Larry Taylor*  
President

STATE OF IOWA  
COUNTY OF POLK ss.

On this 18th day of March, 2011, before me appeared Larry Taylor, to me personally known, who being by me duly sworn did say that he is President of the MERCHANTS BONDING COMPANY (MUTUAL), the corporation described in the foregoing instrument, and that the Seal affixed to the said instrument is the Corporate Seal of the said Corporation and that the said instrument was signed and sealed in behalf of said Corporation by authority of its Board of Directors.

In Testimony Whereof, I have hereunto set my hand and affixed my Official Seal at the City of Des Moines, Iowa, the day and year first above written.



*Cindy Smyth*

Notary Public, Polk County, Iowa

STATE OF IOWA  
COUNTY OF POLK ss.

I, William Warner, Jr., Secretary of the MERCHANTS BONDING COMPANY (MUTUAL), do hereby certify that the above and foregoing is a true and correct copy of the POWER-OF-ATTORNEY executed by said MERCHANTS BONDING COMPANY (MUTUAL), which is still in full force and effect and has not been amended or revoked.

In Witness Whereof, I have hereunto set my hand and affixed the seal of the Company on this 3rd day of April, 2013



*William Warner Jr.*  
Secretary



# CERTIFICATE OF LIABILITY INSURANCE

OP ID: QO

DATE (MM/DD/YYYY)

04/05/13

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> <b>THE MAHONEY GROUP - PHOENIX</b> 20410 N. 19th Ave Ste 170 Phoenix, AZ 85027-1405 Peter Couture	Phone: 623-215-1300 Fax: 623-215-1333	<b>CONTACT NAME:</b> PHONE (A/C No. Ext): E-MAIL ADDRESS: PRODUCER CUSTOMER ID #: <b>SWSLU-1</b>	FAX (A/C No.):
	<b>INSURED</b> <b>Southwest Slurry Seal, Inc.</b> 22855 N 21st Avenue Phoenix, AZ 85027	<b>INSURER(S) AFFORDING COVERAGE</b> <b>INSURER A: State Automobile Mutual Ins Co</b> <b>INSURER B:</b> <b>INSURER C:</b> <b>INSURER D:</b> <b>INSURER E:</b> <b>INSURER F:</b>	

**COVERAGES**                      **CERTIFICATE NUMBER:**                      **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<b>GENERAL LIABILITY</b> <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> XCU included GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC	X	X	PBP2540863	05/31/12	05/31/13	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 500,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COM/POP AGG \$ 2,000,000
	<b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS	X	X	BAP219324302	05/31/12	05/31/13	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$ \$
A	<b>UMBRELLA LIAB</b> <input checked="" type="checkbox"/> OCCUR <b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE DEDUCTIBLE <input checked="" type="checkbox"/> RETENTION \$ 10,000			PBP2540863	05/31/12	05/31/13	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000 \$ \$
	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? <input type="checkbox"/> Y <input checked="" type="checkbox"/> N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below			N/A			

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)  
 City of Glendale Arizona additional insured per SI1024 0108.  
 FORMS: CG2404 1093, SA1008 0303.

<b>CERTIFICATE HOLDER</b>  CITYGLE  City of Glendale, Arizona Attn: Engineering Dept 5850 W. Glendale Avenue Glendale, AZ 85301	<b>CANCELLATION</b>  SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.  AUTHORIZED REPRESENTATIVE 
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**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS –  
AUTOMATIC STATUS (INCLUDING COMPLETED OPERATIONS)**

This endorsement modifies insurance provided under the following:

**COMMERCIAL GENERAL LIABILITY COVERAGE FORM**

- A.** The words "you" and "your" as used in this endorsement refer to the Named Insured shown in the Declarations and any other person or organization qualifying as a Named Insured under the policy to which this endorsement is attached. "You" and "your" do not refer to an additional insured.
- B. The following is added to Section II – Who Is An Insured:**
1. Any person or organization for whom you are performing operations when you and such person or organization have agreed in a written contract or written agreement that such person or organization be added as an additional insured on your policy. Such person or organization is an additional insured only with respect to:
    - a. Liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:
      - (1) Your acts or omissions; or
      - (2) The acts or omissions of those acting on your behalf,in the performance of your ongoing operations for the additional insured.  
A person or organization's status as an additional insured for ongoing operations ends when your operations for that additional insured are completed.
    - b. Liability for "bodily injury" or "property damage" caused in whole or in part, by "your work" at the location designated and described in the written contract or written agreement with that additional insured and included within the "products-completed operations hazard".
  2. With respect to the insurance afforded to the additional insured described above, the following additional exclusions or limitations apply:
    - a. This insurance does not apply to "bodily injury" or "property damage" caused by your ongoing operations, or "your work" included in the "products-completed operations hazard", unless you are required to provide such coverage for the additional insured by a written contract or agreement. The contract or agreement must be in effect during this policy period and signed and executed by you prior to the loss for which coverage is sought. Coverage for the additional insured is provided only for the lesser of: (i) the period of time required by such contract or agreement; or (ii) the end of the policy period. In no event will coverage for the additional insured extend beyond the expiration date of the policy.
    - b. This insurance does not apply to "bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or the failure to render any professional engineering, architectural or surveying services by you or others on your behalf, including:
      - (1) The preparing, approving, failing to prepare approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders, or drawings and specifications; or
      - (2) Supervisor or inspection activities performed as part of any related architectural or engineering activities.However, professional services do not include services within construction means, methods, techniques, sequences and procedures employed by you in connection with your operations in your capacity as a construction contractor.

- c. This insurance does not apply to "bodily injury", "property damage" or "personal and advertising injury" arising out of the sole negligence or willful misconduct of, or defects in design provided by, the additional insured or its "employees".
- d. This insurance does not apply to "bodily injury" or "property damage":
- (1) Occurring after all work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance, or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
  - (2) Once the location designated and described in the written contract or written agreement has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as part of the same project, except to the extent a written contract or written agreement requires coverage to be provided for "bodily injury" or "property damage" included within the "products-completed operations hazard".
- e. With respect to any person or organization added as an additional insured by this endorsement, paragraph 9.f. of Section V – Definitions – Commercial General Liability policy does not apply to "bodily injury" or "property damage" included within the "products-completed operations hazard" unless such contractual assumption of liability is specifically required by a written contract or written agreement.
- f. The insurance as provided in this endorsement does not apply to "bodily injury", "property damage" or "personal and advertising injury" caused by "your work" for which a consolidated (wrap-up) insurance program has been provided by the prime contractor, project manager or owner of a construction project in which you are involved.
3. The Limits of Insurance applicable to an additional insured are those specified in the written contract or written agreement or in the Declarations of this policy, whichever is less. These limits are inclusive of, and are not in addition to, the Limits of Insurance shown on the Declarations.
4. With respect to the coverage provided under this endorsement to an additional insured, the following is added to paragraph 4.a., Other Insurance, of Section IV – Commercial General Liability Conditions:
- However, if a written contract or written agreement in effect during the policy period and signed and executed by you prior to the loss for which coverage is sought specifically requires this insurance to be either primary or primary and non-contributory, this insurance will comply with that requirement.
5. As a condition of coverage, each additional insured must:
- a. Give us prompt written notice of any "occurrence" or offense which may result in a claim and prompt written notice of "suit".
  - b. Immediately forward all legal papers to us, cooperate in the investigation or settlement of the claim or defense against the "suit," and otherwise comply with policy conditions.
  - c. Tender the defense and indemnity of any claim or "suit" to any other insurer which also insures against a loss we cover under this endorsement. This includes, but is not limited to, any insurer which has issued a policy of insurance in which the additional insured qualifies as an insured under any applicable policy definition. For purposes of this requirement, the term "insures against" refers to any self-insurance and to any insurer which issued a policy of insurance that may provide coverage for the loss, regardless of whether the additional insured has actually requested, demanded, or targeted tender that the insurer provide the additional insured with a defense and/or indemnity under that policy of insurance.
  - d. Agree to make available any other insurance that the additional insured has for a loss we cover under this endorsement.

Southwest Slurry Seal, Inc.

POLICY NUMBER: PBP2457734

COMMERCIAL GENERAL LIABILITY  
CG 24 04 10 93

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

**WAIVER OF TRANSFER OF RIGHTS OF RECOVERY  
AGAINST OTHERS TO US**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

**SCHEDULE**

**Name of Person or Organization:** As required by written contract

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

The TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US Condition (Section IV – COMMERCIAL GENERAL LIABILITY CONDITIONS) is amended by the addition of the following:

We waive any right of recovery we may have against the person or organization shown in the Schedule above because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person or organization and included in the "products-completed operations hazard". This waiver applies only to the person or organization shown in the Schedule above.

**BUSINESS AUTO POLICY**  
**BAP 2193243 02**

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

## WAIVER OF TRANSFER RIGHTS OF RECOVERY AGAINST OTHERS

### SCHEDULE

Name of Person or Organization: AS REQUIRED BY WRITTEN CONTRAC T

(If no entry appears above, information required to complete this endorsement will be shown in the declarations as applicable to this endorsement.)

The Transfer Of Rights Of Recovery Against Others To Us Condition is amended by the addition of the following:

We waive any right of recovery we may have against the person or organization shown in the Schedule above because of payments we make for injury or damage as agreed to under a contract with that person or organization in advance of any "accident" or "loss" to which this insurance applies. This waiver applies only to the person or organization shown in the Schedule above.

All other provisions of this policy apply.

This endorsement is a valid part of the policy when the form number is shown on the Declarations.

**SA1008 (03/03) Page 1 of 1**

\*\*\*SA1008-200303



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
4/5/2013

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Minard-Ames Insurance Services LLC 4646 E Van Buren Ste., #200 Phoenix AZ 85008	<b>CONTACT NAME:</b> Patty Dominguez	
	<b>PHONE (A/C, No, Ext):</b> 602-273-1625	<b>FAX (A/C, No):</b> 602-273-0212
<b>E-MAIL ADDRESS:</b> pdominguez@minardames.com		
<b>INSURER(S) AFFORDING COVERAGE</b>		<b>NAIC #</b>
<b>INSURER A:</b> Travelers Property Casualty Co of A		25674
<b>INSURER B:</b>		
<b>INSURER C:</b>		
<b>INSURER D:</b>		
<b>INSURER E:</b>		
<b>INSURER F:</b>		

**COVERAGES** **CERTIFICATE NUMBER:** 1894703615 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	<b>GENERAL LIABILITY</b> <input type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$ \$
	<b>AUTOMOBILE LIABILITY</b> <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> HIRED AUTOS  <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	<b>UMBRELLA LIAB</b> <input type="checkbox"/> OCCUR <b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$
A	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) <input type="checkbox"/> Y <input type="checkbox"/> N If yes, describe under DESCRIPTION OF OPERATIONS below		Y	DTJ-UB-7C16468-9-13	1/1/2013	1/1/2014	X WC STATUTORY LIMITS <input type="checkbox"/> OTH-ER <input type="checkbox"/> E.L. EACH ACCIDENT \$500,000 E.L. DISEASE - EA EMPLOYEE \$500,000 E.L. DISEASE - POLICY LIMIT \$500,000

**DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)**  
 Waiver of subrogation applies in favor of the certificate holder on the employers liability/workers compensation if required in a written contract and/or agreement. Per attached form(s): WC000313(00).  
 Project 121312 - 2012/2013 Slurry Seal Program

<b>CERTIFICATE HOLDER</b>  City of Glendale, Arizona Attn: Engineering Dept. 5850 W. Glendale Avenue Glendale AZ 85301	<b>CANCELLATION</b>  SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.  AUTHORIZED REPRESENTATIVE 
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**WORKERS COMPENSATION  
AND  
EMPLOYERS LIABILITY POLICY  
ENDORSEMENT WC 00 03 13 (00) -**

POLICY NUMBER: **DTJ-UB-7C16468-9-13**

**WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT**

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit any one not named in the Schedule.

**SCHEDULE**

**DESIGNATED PERSON:**

**Any person or organization for which the named insured has agreed by written contract executed prior to loss to furnish this waiver**

**DESIGNATED ORGANIZATION:**

DATE OF ISSUE: - -

ST ASSIGN:

CITY OF GLENDALE, ARIZONA  
PUBLIC WORKS/ENGINEERING DEPARTMENT

CONTRACTOR'S AFFIDAVIT  
REGARDING  
SETTLEMENT OF CLAIMS

PROJECT 121312 - 2012/2013 SLURRY SEAL PROGRAM

To the City of Glendale, Arizona

Gentlemen:

This is to certify that all lawful claims for materials, rental of equipment and labor used in connection with the construction of the above project, whether by subcontractor or claimant in person, have been duly discharged.

The undersigned, for the consideration of \$ \_\_\_\_\_, as set out in the final pay estimate, as full and complete payment under the terms of the contract, hereby waives and relinquishes any and all further claims or right of lien under, in connection with, or as a result of the above described project. The undersigned further agrees to indemnify and save harmless the City of Glendale against any and all liens, claims of liens, suits, actions, damages, charges, costs, litigation expenses, attorneys' fees and any other and expenses whatsoever, which said City may suffer arising out of the failure of the undersigned to pay for all labor performance and materials furnished for the performance of said installation.

Signed and dated at \_\_\_\_\_, this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Contractor

By \_\_\_\_\_

STATE OF ARIZONA        )  
  ) ss.  
COUNTY OF MARICOPA    )

The foregoing instrument was subscribed and sworn to before me this \_\_\_\_ day of \_\_\_\_\_, 20\_\_

\_\_\_\_\_  
Notary Public

My Commission Expires: \_\_\_\_\_

SUPPLEMENTAL GENERAL CONDITIONS

1. **GENERAL:** By Ordinance No. 1110 New Series, the City of Glendale adopted the "Uniform Standard Specifications for Public Works Construction," which are sponsored and distributed by the Maricopa Association of Governments. Copies of these documents, with revisions, are on file in the office of the City Engineer of the City of Glendale, and are hereby made a part of these Contract Documents.

Whenever in the Uniform Standard Specifications, the words "The Contracting Agency" are used, the meaning shall be the City of Glendale.

In all cases where ASTM, AASHTO, AWWA, USAG, Federal, City of Phoenix, MAG Specifications, Maricopa County, Arizona State Highway, City of Glendale or other standard specifications are referred to, unless otherwise stated, revisions, supplements or addenda issued on or before the date of this contract, shall prevail. In the event of any conflict between these project specifications and the requirements of the plans, detail drawings, MAG Standard Details and Specifications, these project specifications shall prevail.

2. **DEFINITIONS:** The following terms, as used in or pertaining to the Contract Documents, are defined as follows:

**CITY:** The word "City" refers to the City of Glendale, Arizona. The official representative of said City in these proceedings shall be the City Engineer.

**CONTRACTOR:** The word "Contractor" means the person, firm, or corporation with whom the Contract is made by the City.

**MATERIALS:** The term "Materials" includes, in addition to materials incorporated in the project, equipment and other material used and/or consumed in the performance of the work.

**SUBCONTRACTOR:** The word "Subcontractor" includes those having a direct contract with the Contractor and those who furnish material worked to a special design according to the plans and/or specifications for this work, but does not include those who merely furnish materials not so worked.

**ENGINEER:** The word "Engineer" means a person, firm or corporation duly authorized by the City, to act for the City in staking out the work, inspecting materials and construction, and interpreting plans and specifications.

**CONTRACT DOCUMENTS:** The words "Contract Documents" mean the Notice to Contractors, Information for Bidders, "Uniform Standard Specifications for Public Works Construction," MAG General Conditions, Supplemental General Conditions, Special Provisions, Supplemental Specifications, Proposal, Contract, Payment Bond, Performance Bond, Certificates of Insurance, Plans and Addenda thereto.

3. **PROPOSAL QUANTITIES:** It is expressly understood and agreed by the parties hereto that the quantities of the various classes of work to be done and material to be furnished under this Contract, which have been estimated as stated in the Proposal, are only approximate and are to be used SOLELY for the purpose of comparing, on a consistent basis, the proposals offered for the work under this Contract; and the Contractor further agrees that the City will not be held responsible if any of the quantities shall be found incorrect; and the Contractor will not make any claim for damages or for loss of profits because of a difference between the quantities of the various classes of work as estimated and the work actually done. If any error, omission, or mis-statement is found to occur in the estimated quantities, the same shall not invalidate this Contract or release the Contractor from the execution and completion of the whole or any part of the work in accordance with the specifications and the plans herein mentioned, or for the prices herein agreed upon and fixed therefore, or excuse him from any of the obligations or liabilities hereunder, or entitle him to any damages or compensation except as may be provided for in this Contract.

4. **WITHDRAWAL OF PROPOSALS:** No proposal shall be withdrawn following the opening and reading of the bids for a period of 50 days from the date of opening without the consent of the contracting agency through the body or agent duly authorized to accept or reject the proposal.

5. **LOSSES AND DAMAGES:** All loss or damage arising out of the nature of the work to be done or from the action of the elements, or from any unforeseen circumstances in the prosecution of the same, or from any unusual obstructions or difficulties which may be encountered in and/or during the prosecution of the work, or from any casualty whatsoever of every description, shall be sustained and borne by the Contractor at his own cost and expense except as otherwise provided by the contract documents or the laws of the State of Arizona.

6. **DUST PREVENTION:** The Contractor shall take whatever steps, procedures or means required to prevent abnormal dust conditions due to his construction operations in connection with this contract. The dust control measures shall be maintained at all times during construction of the project, to the satisfaction of the Engineer, in accordance with the requirements of the "Maricopa County Health Department Air Pollution Control Regulations" which have been adopted pursuant to A.R.S. § 36-779.

The Contractor shall be required to obtain the necessary permit from the Maricopa County Air Pollution Control Bureau, 1001 N. Central Ave., Phoenix, Arizona 85004 - telephone (602) 506-6727.

7. **EXCESS MATERIAL:** Excess material shall be removed from the work site and wasted at a location approved by the Engineer. Broken concrete and asphalt may be delivered to the Glendale Sanitary Landfill located at 115th Avenue and Glendale Avenue. The prevailing regulations and fee schedule will not be waived for work under this project. All materials, to be disposed of at the landfill, shall be weighed and disposed of at the prevailing rate.

8. **STOCKPILE OF MATERIALS:** The Contractor may place or stockpile materials in the public right-of-way, if approved by the Engineer, provided they do not prevent access to adjacent properties or prevent compliance with traffic regulations.

Traffic shall not be required to travel over stockpiled materials, and proper dust control shall be maintained.

9. **REFUSE COLLECTION ACCESS:** At any time the project construction shall require the closure or disruption of traffic in any roadway, alley, or refuse collection easement such that normal refuse collection will be interfered with, the Contractor shall, at least 48 hours prior to causing such closure or disruption, make arrangements with the Field Operations Department in order that refuse collection service can be maintained.

10. **CLEAN-UP:** After all work under this contract is completed, the Contractor shall remove all loose concrete, lumber, wire, reinforcing, debris, and other materials not incorporated in the work, from the site of the work. Clean-up shall include the removal of all excess pointing mortar materials within pipes and removal of over-size rocks and boulders left after finish grading. The contractor shall provide for the legal disposal of all waste products, debris, etc., and shall make necessary arrangements for such disposal.

11. **SHOP DRAWINGS:** The Contractor shall provide shop drawings as may be necessary for the prosecution of the work as required by the contract documents. The Engineer shall promptly review all shop drawings. The Engineer's approval of any shop drawing shall not release the Contractor from responsibility for deviations from the contract documents. The approval of any shop drawing which substantially deviates from the requirements of the contract documents shall be evidenced by a change order.

When submitted for the Engineer's review, shop drawings shall bear the contractor's certification that he has reviewed, checked, and approved the shop drawings and that they are in conformance with the requirements of the contract documents.

Portions of the work requiring a shop drawing or sample submission shall not begin until the shop drawing or sample submission has been approved by the Engineer. A copy of each approved shop drawing and each approved sample shall be kept in good order by the Contractor at the site and shall be available to the Engineer.

12. **PROTECTION OF FINISHED OR PARTIALLY FINISHED WORK:** The Contractor shall properly guard and protect all finished or partially finished work, and shall be responsible for the same until the entire contract is completed and accepted, in writing, by the City. The Contractor shall turn over the entire work in full accordance with the specifications before final settlement shall be made.

13. **STATUS OF EMPLOYEES:** Contractor shall be responsible for assuring the legal working status of its employees and its subcontractor's employees.

14. **LAWS AND REGULATIONS:** This Contract shall be governed by and constructed in accordance with the laws of the State of Arizona. The Contractor shall keep himself fully informed of all existing and future City and County Ordinances and Regulations and State and Federal Laws and Occupational Safety and Health Standards (OSHA) in any manner affecting the work herein specified. He shall at all times observe and comply with said Ordinances, Regulations, or Laws.

15. **PERMITS:** The City has obtained certain required permits which are included in the project specifications, but it will be the duty of the Contractor to determine that all the necessary permits have been obtained. The Contractor shall, at his own expense, obtain all required permits which have not been furnished by the City. A no-fee permit will be issued for work in the City of Glendale right-of-way and easement. (Also see Paragraph 7. Dust Prevention.)

16. **ELECTRIC POWER AND WATER:** The Contractor shall make his own arrangements for electric power and water. Subject to the convenience of the City, he may be permitted to connect to existing facilities where available, but he shall meter and bear the cost of such power or water. Fire hydrant meters may be obtained from the City of Glendale. Installation and removal of meters should be scheduled through the City's Water Services/Utilities Division at 930-2700. For details and current rates, please visit <http://www.glendaleaz.com/CrossConnection/firehydrantmeterprogram.cfm>.

17. **SURVEY CONTROL POINTS AND MONUMENTS:** Existing survey monuments indicated on the plans or found during construction shall be protected by the Contractor, and in the event removal is necessary, removal and replacement shall be performed by permission of the Engineer, under direct supervision of the Engineer or his authorized representative. Survey monuments shall be constructed to conform to the requirements of MAG Specifications, Section 405, and Standard Details.

18. **EXISTING UTILITIES:** The Contractor is hereby advised that the location of all utilities, as shown on the plans, may not be complete nor exact and the Contractor shall satisfy himself as to the exact location of the utilities by contacting Blue Stake or the utility companies before proceeding with the work. After the underground utilities are located by Blue Stake or the utility company, the contractor shall excavate in a careful and prudent manner to prevent unwillful damage to the underground utilities.

In the event the Contractor or its Subcontractor damages an existing, properly identified underground City of Glendale water or sewer line, the Contractor shall be responsible for the repairs at its expense.

The exact location of all existing underground service utilities, whether or not indicated on the plans, shall be determined by the Contractor at no expense to the City, and he shall conduct his work so as to prevent interruption of service or damage to them.

The Contractor shall protect existing utility services and be responsible for their replacement if damaged by him, or to make necessary adjustment in their location, if required, in order to complete the work for his Contract.

Utility companies and other interested parties have been provided with construction plans and the

construction schedule for this project. The Contractor shall comply with MAG Specifications 105.6 to cooperate with the utility companies.

19. **MAINTENANCE OF IRRIGATION FACILITIES:** Where irrigation facilities interfere with construction, the Contractor shall remove and replace the affected irrigation facilities to its original condition. Final acceptance of replaced facilities will depend upon final approval of the Engineer.

20. **OVERHEAD UTILITY LINES AND POLES:** Contractor is advised that when work around overhead lines and poles is required on a project the Contractor is required to coordinate with Utility Companies who own and operate overhead lines and poles. The coordination may include, but not be limited to the following activities: pole bracing, de-energizing of lines, and temporary relocations. Contractor is responsible to contact the applicable Utility Company representative and discuss his proposed construction methods; in order to determine what actions the Utility Company must take and the costs related to those actions. The Contractor shall include these costs in the applicable bid items for this project.

The primary and the backup representatives for this review and cost determinations are as follows:

Arizona Public Service:	Mr. Bobby Garza	602-371-7989
Qwest:	Mr. Ron Floyd	602-630-1932
Salt River Project:	Mr. Tim Rinn	602-236-8694
Salt River Project:	Ms. Mariann Ward	602-236-6389
Cox Communications:	Mr. Ron Pint	623-328-3529
Cox Communications:	Ms. Linda Facio	623-328-3500

21. **SOUTHWEST GAS FACILITIES EXPOSED DURING CONSTRUCTION:** The Contractor, upon exposing a gas line during construction, shall call SOUTHWEST GAS at 602-271-4277. The Southwest Gas patrolman will respond, usually within an hour, to inspect the line. Minor cuts or abrasions to the pipe coating will be rewrapped and tracer wire will be reconnected at no cost to the City.

22. **UNDERGROUND UTILITIES' BEDDING:** All water, sewer, storm drain, irrigation and other conduits installed within the City of Glendale shall be bedded from bottom of excavation to one foot above the pipe with granular bedding material meeting the requirements of Section 601.4.6 of MAG Uniform Standard Specifications. The initial bedding under the pipe shall follow City of Glendale Detail G-690.

23. **SEWER SERVICE LINES:** The Contractor shall be responsible for locating, and protecting from damage during construction, all sewer service lines within the project which are not owned by the City. Contractor will be permitted to review the "as-builts" to assist Contractor in locating the non-City owned sewer service lines. These "as-builts" were prepared, and supplied to the City, by private developers or contractors who installed the non-City owned sewer service lines. Therefore, the City does not guarantee or warranty the accuracy of such "as-builts" and the contractor, as a condition for being allowed to review such "as-builts", hereby agrees to hold the City harmless for any and all damages or other expenses contractor may incur as a result of any inaccuracies or incorrect information in these "as-builts".

24. **RIGHTS-OF-WAY:** The City will provide rights-of-way and easements for all work specified in this Contract, and the Contractor shall not enter or occupy with man, tools, equipment or materials any private ground outside the property of the City of Glendale, Maricopa County, Arizona, without the consent of the property owner.

25. **SUBCONTRACTS:** Subcontracts shall be in accordance with, and the Contractor shall be bound by, the following provisions:

All subcontracts shall be subject to the approval of the City.

All subcontracts shall be in writing and shall provide that all work to be performed thereunder shall be performed in accordance with the terms of the Contract.

Certified copies of any and all subcontracts shall be furnished to the City Engineering Department; however, prices may be omitted.

Subcontracts shall conform to the regulations governing employment of labor.

The subcontracting of any part of the work will in no way relieve the Contractor of his responsibility under the Contract.

26. **PRE-CONSTRUCTION CONFERENCE:** After completion of the Contract Documents, to include bonds, insurance and signatures, and prior to the commencement of any work on the project, the Engineer will schedule a Pre-Construction Conference. This will be held at the City of Glendale, 5850 West Glendale Avenue, Glendale, Arizona.

The purpose of this Conference is to establish a working relationship between the Contractor, Utility Companies, and the Engineer. The agenda will include critical elements of the construction schedule, procedures for handling shop drawings and other submittals, cost breakdown of major lump sum items, payment application and processing, coordination with the involved utility companies, emergency telephone numbers for all representatives involved in the course of construction, and establishment of the Notice to Proceed date.

Minimum attendance by the Contractor shall be a responsible official of the company/corporation, who is authorized to execute and sign documents on behalf of the company/corporation.

27. **OVERTIME:**

Regular Work Hours: The work required to be performed by the Plans and Specifications for the Project shall be performed only during regular working hours, unless the City has authorized overtime work in accordance with the procedures set forth below. Regular working hours shall be defined as one 8-1/2 hour shift per day, Monday through Friday, or, upon prior approval of the City, one 10-1/2 hour shift per day on a compressed four day work week during Monday through Friday. Regular working hours shall not include Saturdays, Sundays or City recognized legal holidays.

Authorization and Costs: If the Contractor desires to schedule work for times other than regular work hours (overtime), the Contractor shall make a written request to the City at least two business days prior to the scheduled overtime. The City reserves the right to deny the request to work overtime based on the best interest and needs of the City. If an overtime request is denied, the City may, at its sole discretion, extend the contract time at no additional costs to the City.

In the event the Contractor does perform work overtime, with or without the prior approval of the City, the Contractor shall be responsible to the City for all additional costs that may be incurred by the City as a result of the Contractor's overtime work, including costs for engineering, inspections, testing, surveying and construction administration, all in accordance with MAG Section 108.5. However, the Contractor shall not be responsible for City's costs incurred as a result of overtime work requested by the City or overtime work resulting from an emergency which is not the responsibility of the Contractor or its employees, subcontractors or suppliers. The City's cost will be billed directly to the Contractor or may, at the City's option, be deducted from monies due the Contractor.

28. **CONTRACTOR'S CONSTRUCTION SCHEDULE:** Concurrently, with the execution of the contract and prior to the preconstruction conference, the Contractor shall submit a preliminary schedule for the Engineer's review and acceptance. The schedule shall be in sufficient detail to allow the Engineer to determine if the proposed schedule will conform to an acceptable program of construction operations, as determined by the contracting agency. Within ten calendar days after the preliminary schedule, described above, has been accepted by the Engineer, the Contractor shall submit a progress schedule, utilizing the critical path method scheduling technique, showing the order in which he proposes to carry out the work, the dates on which he will start each phase of the work, and the contemplated date for completion of each phase. The Contractor shall not be permitted to commence construction until the schedule complying with this paragraph has been submitted to the

City. The Contractor will not be granted any extension to the contract time or compensation for any damages as a result of the City's refusal to allow Contractor to commence construction until the critical path method progress schedule has been submitted and accepted by the Engineer.

The critical path method (CPM) scheduling technique requires a breakdown of the entire work into individual tasks and an analysis of the number of days required to perform each task. The schedule submitted to the City should highlight and identify the critical path for the project. After the work is in progress, the Contractor shall submit supplementary progress schedules, using the critical path method technique, of the progress to date and projection for completion. The supplementary progress schedules shall be submitted with each pay request in accordance with the paragraph, "Payments to Contractors," of these Supplemental General Conditions. The progress schedules shall be subject to the acceptance of the Engineer. In the event the Contractor fails to submit a supplementary progress schedule acceptable to the Engineer, the City may withhold further progress payments to the Contractor until the Contractor submits an acceptable supplementary progress schedule, which is accepted by the Engineer, to the City. Schedule changes requiring an increase in the City's engineering personnel on the project shall not be put into effect until the Engineer has approved such increase and made arrangements for the required additional personnel.

29. CHARACTER OF WORKMEN: None but skilled foremen and workmen shall be employed on work requiring special qualifications. When required by the Engineer, the Contractor shall discharge any person who is, in the opinion of the Engineer, disorderly, dangerous, insubordinate, incompetent, or otherwise objectionable. The Contractor shall keep the City harmless from damages or claims for compensation that may occur in the enforcement of this section of the specifications.

30. HINDRANCES AND DELAYS: Except as otherwise provided herein, no charge shall be made by the Contractor for hindrances or delays from any cause during the progress of the work embraced in this Contract; but such delays, if due to no fault or neglect of the Contractor, shall entitle the Contractor to an extension of time allowed for completing the work, sufficient to compensate for the delay, the amount of the delay to be determined by the Engineer, provided the Contractor shall give said Engineer immediate notice in writing of the cause of such delay.

30.1 Delay: In the event of a delay for which the City is solely responsible, which is unreasonable under the circumstances and which was not within the contemplation of City and Contractor at the time this Contract is executed, City and Contractor shall negotiate, in good faith, a payment by the City to Contractor for the expenses incurred by Contractor as a result of such delay, in accordance with the City of Glendale Engineering Department's POLICY STATEMENT FOR CALCULATING DELAYS AND DAMAGES. This provision shall not be construed to void any provision in the contract which requires notice of delay or provides for liquidated damages. However, if the delay is the result of any act or neglect of a third party, including the architect, engineer or other contractor employed by the City, or by labor disputes, fire, unusual delay in transportation, adverse weather conditions not reasonably foreseeable, unavoidable casualties, or any causes beyond the Contractor's control, the Contractor shall not be entitled to any payments or compensation for expenses incurred as a result of such delay, but the Contract Time shall be extended by Change Order for such reasonable time as the Engineer may determine. No extension or compensation will be granted for any delay which is the result, wholly or partially, of any act or neglect of Contractor or any Subcontractor hired by Contractor.

### 31. LIQUIDATED DAMAGES:

31.1 Should the contractor fail to substantially complete the work under this contract within the time for completion stated in the paragraph "Time of Completion," in the Information for Bidders, then the contractor shall pay the City of Glendale, Arizona, liquidated damages, pursuant to the provisions of Section 108.9, Standard Specifications for Public Works Construction, Maricopa Association of Governments, until the work is substantially complete.

31.2 Should the contractor fail to fully and finally complete the work under this contract within the time for completion set forth in the paragraph "Time of Completion," in the Information for Bidders, even though the contractor has achieved substantial completion of the work within such time, then the

contractor shall pay the City of Glendale, liquidated damages (pursuant to the provisions of Section 108.9, Standard Specifications for Public Works Construction, Maricopa Association of Governments), in an amount equal to 100% of the applicable liquidated damage rate set forth in MAG Section 108.9 for each and every calendar day of delay until the work is fully and finally complete and accepted.

31.3 The date of substantial completion shall be the date when the work is sufficiently complete, in accordance with the contract documents, so the owner can fully occupy and utilize the work or designated portion thereof for the use for which it is intended, with all the project's parts and systems operable as required by the contract documents and all the work is complete, accessible, operable, and usable by the owner for its intended purpose(s), and all parts, systems and sitework are 100% complete and cleaned for the owner's use. Only incidental corrective work and final cleaning (if required), beyond cleaning needed for the owner's full use, may remain for final completion.

31.4 Full and final completion shall be that date when all work under the project, including incidental corrective work under punch list and final cleaning, has been completed and the entire project is accepted by the owner.

32. PAYMENTS TO CONTRACTOR: The measurements of quantities and the payments to the Contractor shall be in accordance with MAG Uniform Standard Specifications for Public Works Construction, Part 100 - General Conditions, Section 109 - Measurements and Payments.

Payments will be made on the basis of itemized, monthly statements prepared by the City and signed by the Contractor. The Contractor shall submit an itemized, duly certified and approved estimate for work completed through the last day of the preceding month in accordance with MAG Specifications, as amended by these Supplemental General Conditions. Upon approval of the pay estimate, the City will mail the check directly to the Contractor.

The pay estimate shall be accompanied by an updated progress schedule as required by these Supplemental General Conditions and a cash flow report when required by the Special Provisions. Approval of progress payments shall be conditional upon submittal of progress schedules and cash flow reports, when required, which are acceptable to the Engineer.

Upon 100% completion and acceptance of the project, and with the request for final payment, the Contractor shall complete and submit the "Contractor's Affidavit Regarding Settlement of Claims" form which is included in these specifications. Before final payment and release of retention, Contractor must arrange for its Surety to provide the City with a fully executed AIA Consent of Surety form. To avoid delays in the final payment, the Surety may send the Consent of Surety directly to the City via fax at (623) 915-2861, and mail the original to the City of Glendale Engineering Department, 5850 West Glendale Avenue, Glendale, Arizona 85301. Should any ambiguity arise between the Contract and these Conditions, the provisions of the Contract shall prevail.

\*\*\*END OF SUPPLEMENTAL GENERAL CONDITIONS\*\*\*

SPECIAL PROVISIONS

1. **SCOPE OF WORK:** This project will replace damaged asphalt, provide crack sealing, as well as single / double slurry seal applications on various roadways within the City of Glendale. Additional items of work may include striping & marking.
2. **CONSTRUCTION SEQUENCING / SCHEDULE:** The Contractor shall complete all work shown on the maps in a logical sequence to complete the project in an efficient manner. Contractor construction sequencing schedule shall be approved by the City prior to commencing construction. Additionally, the Contractor shall schedule traffic closures or restrictions around the schedule of all local schools.
3. **DEFINITIONS:**
  - A. **Section:** Reference to a Section on the plans or in these Specifications shall mean a Section of the Uniform Standard Specifications for Public Works Construction, sponsored and distributed by Maricopa Association of Governments (MAG), latest revision. The provisions of MAG Uniform Standard Specifications and Details for Public Works Construction, which are not altered or modified by the drawings or by these Special Provisions or by any subsequently issued Addendum, shall apply to the contract even though the Contractor's attention is not specifically drawn to such provisions.
  - B. **Standard Detail:** Reference to a MAG Standard Detail (M.A.G. Std. Det.) on the plans or in these specifications shall mean a standard detail drawing in the latest revision of the Uniform Standard Specifications for Public Works Construction, sponsored and distributed by Maricopa Association of Governments. City of Glendale Standard Detail (C.O.G. Std. Det.) shall mean a standard detail drawing in the City of Glendale's Engineering Design and Construction Standards, latest revision. City of Phoenix Standard Detail (C.O.P. Std. Det.) shall mean a standard detail drawing in the Phoenix Supplemental Standard Details for Public Works Construction, latest revision.
4. **SUSPENSION OF WORK:** The Engineer reserves the right to suspend the work wholly or in part if deemed necessary for the best interest of the City. This suspension will be without compensation to the Contractor, other than to adjust the contract time in accordance with Section 108.
5. **COMPLIANCE WITH MANUFACTURER'S INSTRUCTIONS:** In all instances wherein the item and/or specifications require installation or construction in accordance with either manufacturer's or supplier's recommendations and/or instructions, said recommendations and/or instructions shall be submitted with the applicable portions clearly marked for approval prior to the commencement of work on that item or portion of the contract.
6. **STOCK PILE LOCATIONS:** The Contractor shall be responsible for securing and maintaining a marshalling yard as specified in MAG Standard Specification Sections 104.1.3, 104.1.4, and 107.6.1.
  - A. **MAG 107.6.1 "Contractor's Marshaling Yard:** If the Contractor or his subcontractor utilizes property outside the limits of the project in the performance of the contract, the Contractor/subcontractor shall comply with the following:
    - 107.6.1.1 Contractor's Marshaling Yard when the Agency is the Contracting Party:**
      - (A) Prior to occupying the property, the Contractor shall provide written notification as to the number and location of all properties to be used. The notification shall specify in detail how the Contractor proposes to use each property and how he proposes to comply with (B) through (D) below. Also, the Contractor shall provide a statement, signed by the property owner(s), which gives the Contractor permission to use the property. (B) The property(s) shall be adequately maintained to control dust, mud, trash and other pollutants from leaving the property. (C) Work on the property(s) shall be scheduled so as to comply with the

Agency Noise Ordinance. (D) Use of the propelly(s) such as location of stored materials, service of equipment, etc., shall be conducted to minimize impact on adjacent properties. (E) The Contractor shall leave the property in a condition, as determined by the Engineer, equivalent to that which existed prior to entry. In no case shall any use cause, or allow to remain, any negative impact to adjoining properties or right-of-way unless such impact existed prior to the Contractors' use. (F) The Contractor shall obtain a written release signed and dated from each property owner after completion of use. Each release shall state that, at the time of signing, the owner accepts the property in its present condition from the Contractor and relieves the Contractor and the Agency from any or all claims for the use or damage to said property. A copy of each release shall be submitted to the Engineer. (G) This Subsection also applies to all levels of subcontractors who will need to obtain marshaling yards for the project, which will be separate from that of the Contractor. It will be the responsibility of the Contractor to obtain copies of the various documents from the subcontractors, as required above, and provide them to the Engineer.

- B. MAG 107.6.1.2 Contractor's Marshaling Yard when the Agency is not the Contracting Party (private development, utility work, subdivision construction, etc): All conditions will apply as in Subsection 107.6. 1.1 except that the permit holder will be responsible for obtaining all documents. The permit holder will retain the documents and make them available to the Agency upon request.
- C. MAG 107.6.2 The Contractor shall comply with the Agency Code concerning work hours and noise level during construction.

#### 7. TRAFFIC REGULATIONS:

All traffic affected by this construction shall be regulated in accordance with the City of Phoenix "Traffic Barricade Manual," and these Special Provisions. The following traffic restrictions are minimum requirements throughout the construction period:

- 7.1.1 A travel lane will not be considered as satisfactorily open to traffic until it has been graded reasonably smooth and is paved. This shall be considered temporary pavement and shall be removed completely before proceeding with final surfacing.
- 7.1.2 The Contractor shall provide and maintain all necessary traffic controls, and must provide flashing arrow boards to protect and guide traffic for all work in the construction area.
- 7.1.3 An intersection shall be defined as all of the area within the right-of-way of intersecting streets, plus two-hundred fifty (250) feet beyond the center of the intersected streets on all legs of the intersection.
- 7.1.4 All traffic control plans must be submitted through the City Transportation Services online application process three business days in advance of any work within the city right of way. Any changes to the plan must be resubmitted through the online process three business days in advance of the change.
- 7.1.5 All traffic control must be set and picked up by a company that is certified to work in the City of Glendale.
- 7.1.6 The Contractor shall be required to provide a uniformed off-duty City of Glendale police officer to assist with traffic control whenever traffic in any one direction is restricted to one lane at a signalized major intersection or at other locations if it should become necessary in the opinion of the Transportation Director or Designee. If the Contractor chooses to use a police officer at other locations during peak traffic hours or to assist with his other traffic control operations, the cost shall be included in the lump sum for "Traffic Control" and not paid out of the hours allowed for "Off Duty Glendale Police Officer." All requests for off-

duty officers will be made through the Glendale Police Department, Off-Duty Work Administrator. The Contractor must provide evidence of workmen's compensation coverage before any officer will be permitted to work.

Measurement for payment of the uniformed off-duty Glendale police officer hours will be made by the actual number of man-hours used for traffic control at signalized major intersections or as approved by the Engineer. Because the quantity of hours is dependent on the Contractors schedule of activities, the unit price bid for this item will be administered as a contingency bid item and any adjustment in hours will not be subject to the 20 percent limitation.

Payment for the off-duty Glendale police officer will be made at the contract unit price bid per hour for OFF DUTY GLENDALE POLICE OFFICER and shall include the net hourly rate of \$35.00 per police officer with a three (3) hour minimum. The net hourly rate shall be increased to include withholding for Federal, State, FICA, Medicare, Workmen's Compensation insurance and any payroll administrative costs.

8. **ENERGIZED AERIAL ELECTRICAL POWER LINES:** Utility companies maintain energized aerial electrical power lines in the immediate vicinity of this project. Do 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) feet clearance between the lines and all construction equipment and personnel. (See: OSHA Standard 1926.550(a)15.) As an additional safety precaution, Contractors should also be instructed to call the utility company to arrange, if possible, to have these lines de-energized or relocated when the work reaches their immediate vicinity. The cost of such temporary arrangements would be borne by the Contractor. The utility company can often respond to such requests if two days advance notice is given, but some situations may require up to sixty (60) days lead time for relocation or other arrangements.
9. **RECORD DRAWINGS:** The Contractor shall maintain one set of contract drawings with all changes, deviations, additions and deletions clearly marked thereon. Upon completion of the work, this set of drawings, shall be marked "RECORD DRAWINGS," dated, and delivered to the Engineer prior to approval of the Contractor's final payment request.
10. **PUNCH LIST ITEMS:** The Contractor shall complete all punch list items 30 days after punch list is received by Contractor from the City.
11. **CASH FLOW REPORT:** The Contractor shall prepare a Cash Flow Report for projected monthly project cash flow on a City provided form and submit it for approval prior to issuance of the Notice to Proceed. The accumulation of monthly pay estimate costs shall be plotted versus time in accordance with the proposed construction schedule. After approval, the Contractor shall submit an updated Cash Flow Report prior to the receipt of each Progress Payment. Each updated Cash Flow Report shall reflect the Contractor's actual monthly payment versus the actual elapsed contract time.

At the City's request, if the projected quarterly project cash flow varies by more than ten percent of the total contract price, the Contractor shall prepare a revised Cash Flow Report. Each revised Cash Flow Report is subject to approval by the City prior to issuance of the progress payment.

Revisions to the report resulting from Contractor initiated delays or work schedule changes shall be at no cost to the City. Any revisions required by City initiated delays or changes to the work shall be paid as an integral part of the approved Change Order.

12. **SAWCUTTING & REMOVALS:** Sawcutting, as well as removal and disposal of any and all asphalt and/or concrete is incidental to the project construction scope.

13. **SAFETY AND DAILY CLEANUP:** The contractor shall remove all debris and other deleterious construction material materials from the worksite on a daily basis. The Contractor shall at all times so conduct his work as to assure the least possible obstruction to traffic and adjacent residents. The Contractor shall provide for the safety, convenience, and the protection of persons and property, of the general public, and residents along the street, highway, and areas adjacent to the work area.
14. **PAVEMENT MARKING PLANS:** Bid Schedule includes pay items for pavement markings. No pavement marking plans were prepared/distributed for this project. All locations of existing pavement markings to be disturbed by construction activities shall have the pre-construction condition, layout and material documented by the Contractor and submitted to the City for review. Upon approval from the City, existing pavement markings shall be replaced, in kind, after improvements have been completed, and will be for under ALLOWANCE FOR STRIPING (CONTINGENCY).
15. **CONSTRUCTION SIGN:** The project type to be indicated on the sign shall be 121312 – 2012/2013 SLURRY SEAL PROGRAM. See "Construction Sign Detail."
16. **ALLOWANCE FOR CONSTRUCTION CONTINGENCIES:** Bid schedule includes a lump sum contingency allowance. This allowance is for the sole purpose of reimbursing Contractor for any unforeseen issues not apparent at the time of bidding work performed.

No work anticipated for reimbursement under this Bid Item shall be initiated by Contractor until Contractor, Engineer and COG agree on scope and cost to perform additional work. The Contractor shall prepare and submit to Engineer a cost itemization and summary for the additional work. Engineer and COG shall review and approve prior to Contractor proceeding with additional work. Any portion of the stated sum not expended remains the property of the City of Glendale.

Work under this section shall consist of any additional work identified by the City and contractor due to construction activity. All work under this item shall be itemized as per MAG requirements and deducted from the set amount of \$68,000.00. All additional work under this item shall be approved by the resident engineer and the City prior to commencing. All work under this section shall include, but is not limited to, all necessary materials, tools, layout, survey and labor required to complete each task.

Measurement and payment for this item shall be made on individual basis per task and as described above. Limit for this item is set at the price specified on the bid tab under ALLOWANCE FOR CONSTRUCTION CONTINGENCY.

17. **ALLOWANCE FOR STRIPING (CONTINGENCY):** Bid schedule includes a lump sum contingency allowance for the sole purpose of reimbursing Contractor for any striping within roadway areas that are disturbed by construction activities.

No work for reimbursement under this Bid Item shall be initiated by Contractor until Contractor, Engineer and the City agree on scope and cost to perform striping work. The Contractor shall prepare and submit to Engineer a cost itemization and summary for the additional work for each location.

Work under this section shall consist of any additional work identified by the City and contractor due to construction activity. All work under this item shall be itemized as per MAG requirements and deducted from the bid amount of \$10,000.00. All additional work under this item shall be approved by the resident engineer and the City prior to commencing. All work under this section shall include, but is not limited to, all necessary materials, tools, layout, survey and labor required to complete each task.

Measurement and payment for this item shall be made on individual basis per task and as described above. Limit for this item is set at the price specified on the bid tab under ALLOWANCE FOR STRIPING (CONTINGENCY).

18. CONSTRUCTION MATERIAL SAMPLING & TESTING: The Contractor, at their expense, shall provide adequate personnel for construction materials sampling and testing functions as required by the City of Glendale. Proof of certifications of the following requirements shall be provided to the City of Glendale prior to commencement of construction:

17.1 LABORATORY TESTING SERVICES: Construction materials testing laboratories must meet the following requirements in order to perform laboratory testing on construction materials samples:

- Possess and maintain current AASHTO accreditation (including R18) provided by the AASHTO Materials Reference Laboratory (AMRL), and Cement and Concrete Reference Laboratory (CCRL) in any test methods performed and be currently participating in their respective proficiency programs.
- Concrete strength testing must be performed by a technician currently certified by the American Concrete Institute (ACI) as a "Concrete Strength Testing Technician".

17.2 FIELD TESTING AND SAMPLING SERVICES: Field technicians shall be employed by the construction materials testing laboratory noted above and have current "Field Technician Certification" from the Arizona Technical Testing Institute (ATTI) and current "Concrete Field Testing Technician - Grade 1" certification from the American Concrete Institute.

17.3 TESTING FREQUENCIES: Laboratory and field testing and sampling shall adhere to the current City of Glendale minimum frequencies (See Below Table). Formal documentation, records etc. shall be provided to the City in a timely manner and as part of required project documentation for overall project acceptance. The City reserves the right to utilize independent / additional testing to confirm prior results.

<b>City of Glendale Minimum Construction Materials Field Testing Frequency</b>				
<b>Type of Material</b>	<b>Type of Structure</b>	<b>Minimum Test Frequency</b>	<b>Minimum Test Requirement</b>	<b>Test Method</b>
Native In-Situ	Curb, Gutter & Sidewalk	1-per 500 lin.ft.	90% & +2 -4% of optimum moisture	ASTM D-698 / D-2922
Native In-Situ	Roadway Subgrade	1-per 500 lin.ft.	95% & +2 -4% of optimum moisture	ASTM D-698 / D-2922
Native In-Situ	Trench Backfill	1-per 500 lin.ft. per 1 ft. lift	95% & +2 -4% of optimum moisture	ASTM D-698 / D-2922
Native In-Situ	Structural Fill	1-per lift	95% & +2 -4% of optimum moisture	ASTM D-698 / D-2922
Native In-Situ	Driveways, Aprons, Valley Gutters	1- per structure	95% & +2 -4% of optimum moisture	ASTM D-698 / D-2922
Aggregate Base	Pipe Bedding	1-per 500 lin.ft.	95%	ASTM D-698 / D-2922
Aggregate Base	Curb, Gutter & Sidewalk	1-per 500 lin.ft.	95%	ASTM D-698 / D-2922

Aggregate Base	Roadway Base	1-per 500 lin.ft.	100%	ASTM D-698 / D-2922
Aggregate Base	Structural Fill	1-per lift	95%	ASTM D-698 / D-2922
Concrete	Curb, Gutter, Sidewalk, Driveways	1 set per 50 yards or 1/2 days pour	1 set of (4) 4X8 Cylinders	ASTM C-71 / C-172
Asphaltic Concrete	Roadway (Arterial)	1-per 750 lin.ft. per pass	92% - Nuclear Density	ASTM D-2950 / D-2041
Asphaltic Concrete	Roadway (Arterial)	1-per 750 lin.ft. per pass	92% - Core Density	ASTM D-2726
Asphaltic Concrete	Roadway (Residential)	1-per 750 lin.ft. per pass	95% - Marshall Density	ASTM D- 6926/D6927
Asphaltic Concrete	Roadway (Residential)	1-per 750 lin.ft. per pass	95% - Core Density	ASTM D-2726
Asphaltic Concrete	Roadway	1 Sample per 500 tons	Uncompacted Field Sample	AC Laboratory Tests*
<b>NOTE:</b>	<p>This table is based on the approximate <b>minimum</b> number of tests to be performed and requirements may be increased depending on site conditions or other circumstances at the discretion of the City of Glendale.</p> <p>* All Asphaltic Concrete Laboratory Tests are covered on another sheet provided upon request.</p>			
* All Asphaltic Concrete Laboratory Tests are covered on another sheet provided upon request.				

Revised 01/07/2013

\*\*\*END OF SPECIAL PROVISIONS\*\*\*



# Project Life Cycle Cash Flow Schedule

Project No.: 101130

Date: \_\_\_\_\_

Project Name: 2012 FIRE HYDRANT & VALVE REPLACEMENT

Company Name: \_\_\_\_\_

Project Start Date:  Project Completion Date   
 Original  Updated  Revised

Qtr.	Fiscal Yr.	Estimated		Actual	
		Amount	Accum.	Amount	Accum.
1st	07/11 - 09/11				
2nd	10/11 - 12/11				
3rd	01/12 - 03/12				
4th	04/12 - 06/12				
1st	07/12 - 09/12				
2nd	10/12 - 12/12				
3rd	01/13 - 03/13				
4th	04/13 - 06/13				
1st	07/13 - 09/13				
2nd	10/13 - 12/13				
3rd	01/14 - 03/14				
4th	04/14 - 06/14				
1st	07/14 - 09/14				
2nd	10/14 - 12/14				
3rd	01/15 - 03/15				
4th	04/15 - 06/15				
1st	07/15 - 09/15				
2nd	10/15 - 12/15				
3rd	01/16 - 03/16				
4th	04/16 - 06/16				
Totals		\$ -	\$ -	\$ -	\$ -

\* COG's fiscal year is July 1, (current year) through June 30, (following year)

<b>For Engineering Use Only:</b>	
Account No: _____	PO No. _____

# CONSTRUCTION SIGN DETAIL

CONSTRUCTION SIGNS ARE TO BE IN PLACE BEFORE PHYSICAL CONSTRUCTION BEGINS

SIGNS SHALL BE MADE OF 3/4" AC EXTERIOR PLYWOOD OR OTHER MATERIAL APPROVED BY THE ENGINEER

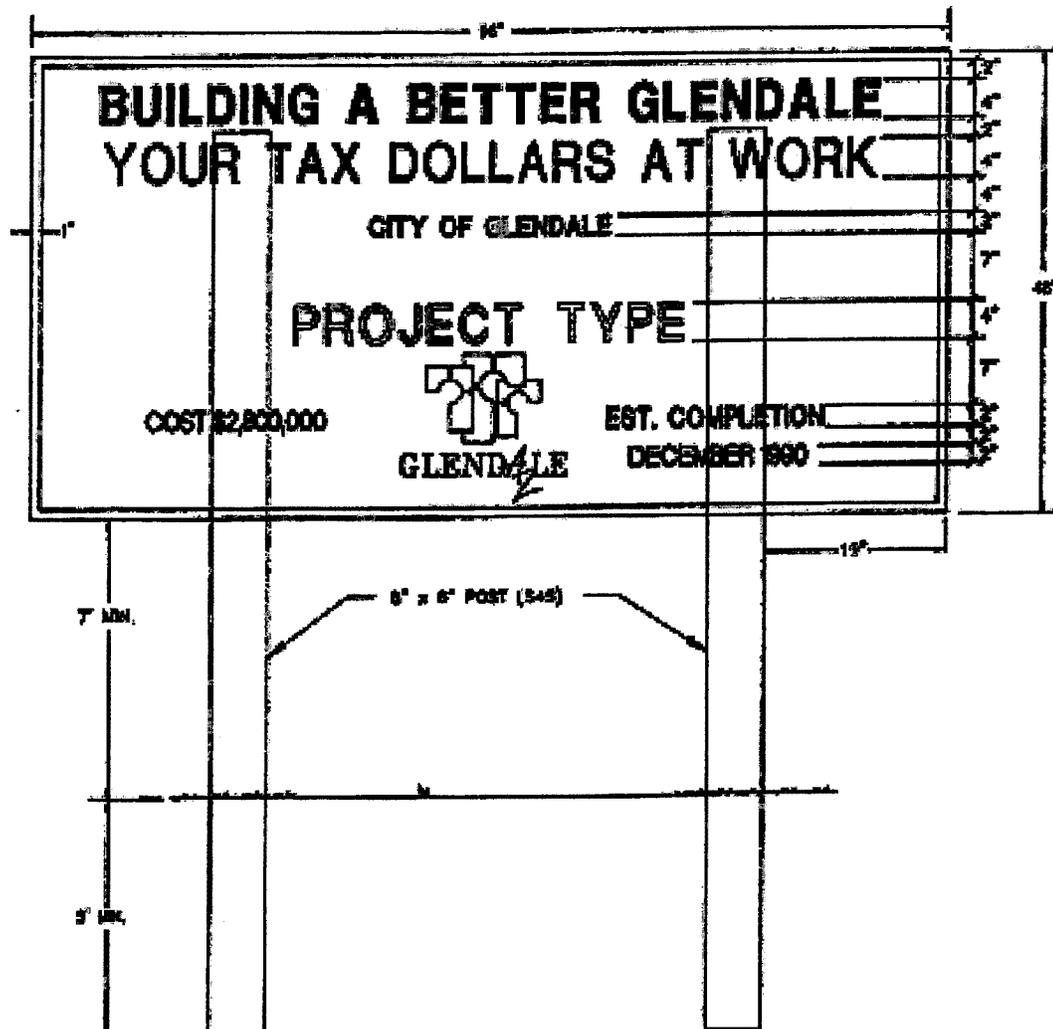
BACKGROUND TO BE PAINTED WHITE WITH STENCIL BLACK LETTERS, NUMERALS AND BORDER.

POSTS SHALL BE PAINTED WHITE. ALL MOUNTING HARDWARE TO BE RUST PROOF MATERIAL

SIGNS SHALL BE SO PLACED THAT THEY WILL NOT OBSCURE OR DETRACT FROM OTHER SIGNING.

CONTRACTOR TO FILL IN THE PROJECT TYPE, COMPLETION DATE, AND COST AS DIRECTED.

THE TWO COLOR GLENDALE LOGO IS AVAILABLE BY CONTACTING THE CITY OF GLENDALE ENGINEERING DEPT. AT 623-930-3630.



**SUPPLEMENTAL SPECIFICATIONS – ASPHALT REMOVE/REPLACE**

**I. GENERAL:** The City of Glendale adopted the "Uniform Standard Specification for Public Works Construction", which are sponsored and distributed by the Maricopa Association of Governments. These documents, with revisions, are hereby made a part of these contract documents. Whenever in the Uniform Standards Specification, the words "the contracting agency" is used, the meaning shall be the City of Glendale.

In all cases where ASTM, ASSHTO, AWWA, USAS, Federal, City of Phoenix, MAG Specifications, Maricopa County, Arizona State Highway, or other standard specifications are referred to, unless otherwise stated, revision, supplements or addenda issued on or before the date of this contract, shall prevail.

In the event of any conflict between these project specifications and the requirements of the plans, detail drawing, MAG Standard Details and Specifications, these project specifications shall prevail.

**II. CONSTRUCTION SPECIFICATIONS ASPHALT REMOVE/REPLACE**

**1. Description**

The work described herein shall consist of sawcutting asphalt to limits marked in the field, removal of asphaltic concrete, cleaning debris from existing sub-grade, scarify and re-compact existing subgrade to minimum MAG compaction requirements, and placement of new 1/2" (12.5 mm) asphaltic concrete.

All asphalt remove/replace locations shall not extend into curb, gutter, sidewalk, valley gutter or other existing improvements.

**2. Location of Work**

All asphalt repair areas indicated on the project improvement exhibits have been marked in the field with white marking paint. All areas shall be field verified by the Contractor prior to commencing construction and any areas unable to be located by Contractor shall be brought to the attention of the City of Glendale prior to proceeding. The City reserves the right to make additions or deletions to the original quantity amount, and/or to the streets or number of streets, at the price bid per square yard.

**3. Asphaltic Concrete Mix Designs**

Asphalt mix designs shall be prepared and submitted for approval in accordance with the current version of MAG Uniform Standard Specifications and Details for Public Works Construction Section 710 "Asphalt Concrete".

Asphalt concrete shall be produced and placed in accordance with MAG Section 321 "Placement and Construction of Asphalt Concrete Pavement".

The designation for asphalt concrete mixes shall be based on the nominal maximum aggregate size of the mix as indicated in the MAG Uniform Standard Specifications. The applicable mix designations are 3/8 inch (9.5mm), 1/2 inch (12.5mm), 3/4 inch (19mm) and Base 1" (25mm) mix.

Gyratory mixes shall be used for high / intermediate traffic conditions, Marshall Mixes for low traffic conditions. High / intermediate traffic conditions are conditions where the asphalt mix will be subject to higher volumes and/or heavier weight vehicle usage such as found on major arterial, collector, and commercial streets. Low traffic conditions are conditions where the asphalt mix will be subject to lower volumes and lower weight vehicle usage. Examples are residential streets, most parking lots and residential minor collector streets. When in dispute, street classifications (i.e. minor, collector, major collector) shall be determined by the City of Glendale or as dictated on project plans.

The following table (MAG Table 710-1) displays the recommended lift thickness for various asphalt concrete mix designations found within MAG Section 710. Please note that these recommended lift thicknesses are minimums based on each mix designation's "Nominal Aggregate Size" and the relative coarseness of its gradation. The compacted thickness of layers placed shall not exceed 150% of the Minimum Lift Thickness of Table 710-1 (below) except as otherwise provided in the plans and specifications, or if approved in writing by the Engineer.

Table 710-1		
RECOMMENDED MINIMUM LIFT THICKNESS'S for ASPHALT CONCRETE MIXES		
Asphalt Concrete Mix Designation (inches)	Minimum Lift Thickness Marshall Mixes	Minimum Lift Thickness Gyratory Mixes
3/8"	1.0"	1.5"

1/2"	1.5"	2.0"
3/4"	2.5"	3.0"
BASE	3.0"	n/a

#### 4. Asphaltic Concrete Material Sampling & Testing

The Contractor, at their expense, shall provide adequate personnel for construction materials sampling and testing for asphaltic concrete, as required by the City. Laboratory and field testing and sampling shall adhere to the current City of Glendale minimum frequencies (See Below Table, and Section 17 of the Special Provisions). Formal documentation, records etc. shall be provided to the City in a timely manner and as part of required project documentation for overall project acceptance. The City reserves the right to utilize independent / additional testing to confirm prior results.

<b>CITY OF GLENDALE - CONSTRUCTION ENGINEERING</b>				
<b>Materials Testing Section</b>				
<b>ASPHALTIC CONCRETE MINIMUM SAMPLING AND TESTING FREQUENCY</b>				
<b>TYPE OF SAMPLE</b>	<b>REQUIRED TEST(S)</b>	<b>TEST METHOD DESIGNATION</b>	<b>MINIMUM SAMPLE FREQUENCY</b>	<b>MINIMUM SIZE OF SAMPLE</b>
COLD FEED AGGREGATE OR COMBINED HOT-BIN AGGREGATE SAMPLES	SIEVE ANALYSIS	A.S.T.M. C - 136	1 - EVERY 500 TONS	25Kg
	SAND EQUIVALENT	A.S.T.M. D - 2419	1 - PER DAY	10Kg
	SPECIFIC GRAVITY (COARSE & FINE)	A.S.T.M. C-127 / C-128	1 - PER DAY	12Kg
	SIEVE ANALYSIS	A.S.T.M. C - 136	1 - PER EACH ADDITIONAL 500 TONS PRODUCED	25Kg
	SIEVE ANALYSIS	A.S.T.M. C - 136	1 - PER EACH ADDITIONAL 500 TONS PRODUCED	25Kg
	IGNITION- GRADATION	ARIZ.427	1 - PER FIRST 500 TONS PER DAY	9 Kg
	GYRATORY COMPACTION	AASHTO TP4	1 - PER FIRST 500 TONS PER DAY	9 Kg
UNCOMPACTED ASPHALTIC CONCRETE MIXTURE	IGNITION- GRADATION	ARIZ. 427	1 - PER FIRST 500 TONS PER DAY	9 Kg
	GYRATORY COMPACTION	AASHTO TP4	1 - PER FIRST 500 TONS PER DAY	9 Kg
	MAX. THEORETICAL SPECIFIC GRAVITY	ASTM D-2041	1 - PER FIRST 500 TONS PER DAY	7 Kg
	IGNITION- GRADATION	ARIZ.427	1 - PER FIRST 500 TONS PER DAY	9 Kg
	MARSHAL COMPACTION	ASTM D- 6926/D6927	1 - PER FIRST 500 TONS PER DAY	9 Kg
COMPACTED ASPHALTIC CONCRETE MIXTURE	NUCLEAR DENSITY	A.S.T.M. D - 2950	1 - PER 750 LINEAR FT PER PASS OR RIBBON	N/A
	SPECIFIC GRAVITY BY CORE SAMPLE	A.S.T.M. D - 2726	1 - PER 750 LINEAR FT PER PASS OR RIBBON	N/A

Revised 01/07/2013

#### 5. Measurement

Asphalt remove/replace shall be measured by the square yard defined by the sawcut lines.

6. Payment

The accepted quantities of asphalt remove/replace, measured as provided above, will be paid for at the contract unit price per square yard, which price shall be full compensation for the work, complete in place, with no allowance for waste, and shall include labor, equipment, tools, and incidentals to complete the work as prescribed and as directed by the Engineer. Saw cutting shall be considered incidental to this bid item and will not be paid separately.

No payment will be made for materials rejected due to improper placement, improper proportions of materials, or material found to be defective or out of specifications. Contractor shall remove and replace rejected material at their own cost.

**\*\*\*END OF SUPPLEMENTAL SPECIFICATIONS – ASPHALT REMOVE/REPLACE\*\*\***

## SUPPLEMENTAL SPECIFICATIONS – CRACK SEALING

**I. GENERAL:** The City of Glendale adopted the "Uniform Standard Specification for Public Works Construction", which are sponsored and distributed by the Maricopa Association of Governments. These documents, with revisions, are hereby made a part of these contract documents.

Whenever in the Uniform Standards Specification, the words "the contracting agency" is used, the meaning shall be the City of Glendale.

In all cases where ASTM, ASSHTO, AWWA, USAS, Federal, City of Phoenix, MAG Specifications, Maricopa County, Arizona State Highway, or other standard specifications are referred to, unless otherwise stated, revision, supplements or addenda issued on or before the date of this contract, shall prevail.

In the event of any conflict between these project specifications and the requirements of the plans, detail drawing, MAG Standard Details and Specifications, these project specifications shall prevail.

## II. CONSTRUCTION SPECIFICATIONS

### CRACK SEALING

#### 1. Description

The work described herein shall consist of an application of hot applied, single component polymer modified asphalt rubber, supplied in solid form used to seal cracks or joints in asphalt concrete pavements. Cracks or joints that will be sealed shall be a minimum of ¼ inch wide at time of work, and have a maximum width of 1 inch.

#### 2. Location of Work

The streets to have crack sealing applied are indicated on the project improvement exhibits. All cracks meeting the requirements of this specification on each street identified shall be sealed. The estimated lengths include cul-de-sacs, elbow turns and curb returns. The City reserves the right to make additions or deletions to the original quantity amount, and/or to the streets or number of streets, at the price bid per linear foot.

#### 3. Materials

Materials shall be a premixed, single component mixture of asphalt cement, aromatic extender oils, polymers, and granulated rubber in a closely controlled manufacturing process. Materials will conform to the following specifications when heated in accordance to ASTM D5078 to the manufactures maximum safe heating temperatures.

TEST	TEST METHOD	SPECIFICATION LIMITS
Cone Penetration	ASTM D5329	20-40
Resilience	ASTM D5329	30% Minimum
Softening Point	ASTM D113	210°F (99°C) Minimum
Ductility, 77F (25C)	ASTM D113	30 cm Minimum
Flexibility	ASTM D3111 *Modified	Pass at 30°F (-1°C)
Flow 140°F (60°C)	ASTM D5329	3 mm Maximum
Brookfield Viscosity, 400°F (204°C)	ASTM D2669	100 Poise Maximum
Asphalt Compatibility	ASTM D5329	Pass
Bitumen Content	ASTM D4	60% Minimum
Tensile Adhesion	ASTM D5329	400% Minimum
Maximum Heating Temperature		400°F (204°C)
Minimum Heating Temperature		380°F (193°C)
*Specimen bent 90° over a 1-inch mandrel within 10 seconds		

##### 3.1 Certification and Quality Assurance:

Prior to application, the Contractor shall submit certification of compliance to the Engineer for all materials to be used in the work.

#### 4. Equipment

The melter applicator unit shall be a self-contained double boiler device with the transmittal of heat through

heat transfer oil. It must be equipped with an on board automatic heat controlling device to permit the attainment of a predetermined temperature, and then maintain that temperature as long as required. The unit shall also have a means to vigorously and continuously agitate the sealant to meet the requirements of Appendix X1.1 of ATSM D6690. The sealant shall be applied to the pavement under pressure supplied by a gear pump with a hose and wand and direct connecting applicator tip. The pump shall have sufficient pressure to apply designated sealant at a rate of at least three (3) gallons (11.4 L) per minute. Melter applicators shall be approved for use by the sealant manufacturer.

## 5. Application

The sealant shall be applied in the crack or joint reservoir uniformly from bottom to top and shall be filled without formation of entrapped air or voids.

The crack or joint shall be slightly overfilled then leveled with a 3" sealing disk or v-shaped squeegee to create a neat band aid extending  $\pm 1"$  on each side of the crack or joint for surface strength and waterproofing. The band aid shall not be more than 1/8 inch in thickness above the pavement surface.

If the pavement being sealed will be overlaid with Hot Mix Asphalt within six months of sealant application, cracks shall be routed, and sealant placement shall be recessed 1/4" (6 mm) in the crack or joint reservoir with no over band. If routing is not used, the sealant over band thickness and width should be kept as narrow and thin as possible.

## 6. Cleaning and Preparing Cracks or Joints

Prior to application of polymer modified asphalt rubber, all cracks or joints shall be cleaned out of any debris and dust. As directed by the Engineer, final cleaning of the cracks or joints shall be vacuumed. Routing cracks and joints will extend crack sealant life and performance. Most cracks in Maricopa County have less than 1/8" movement over the course of a year. On cracks that have spacing which creates more than 1/8" movement it is recommended that cracks be routed.

### 6.1 Routing:

Routing, when specified, is incidental work and is included the project cost. Routing the cracks should be used to create a sealant reservoir. Cutting should remove at least 1/8" (3 mm) from each side and produce vertical, intact surfaces with no loosely bonded aggregate. Joints and cracks should be routed to a 3/4" (19mm) W x 3/4" (19mm) D configuration for a typical application.

### 6.2 Vacuuming:

Final cleaning shall thoroughly clean cracks and joints to a minimum of 1". The vacuum unit shall use high pressure 90 psi (620 kPa) minimum, dry, oil free compressed air to remove any remaining dust, directly attached to a vacuum unit to collect the dust and residue. Both sides of the crack or joint shall be cleaned. Surfaces will be inspected to assure adequate cleanliness and dryness.

## 7. Opening to Traffic

Material shall not be exposed to traffic until fully cured. If sealed area must be open to traffic a blotter material can be applied to surface of polymer modified asphalt rubber.

### 7.1 Blotter:

On two lane roads or where traffic may be likely to come in contact with the hot sealant before it cures, a blotter or specialized bond breaking material may be required to prevent asphalt bleeding and/or pickup of sealant by vehicular traffic. Blotter material should be compatible with crack sealant and any surface treatment being used.

## 8. Pavement Temperatures

Polymer modified asphalt rubber shall be applied when pavement temperature exceeds 40°F (4°C). Lower temperatures may result in reduced adhesion due to the presence of moisture or ice. If pavement temperature is lower than 40°F (4°C), it may be warmed using a heat lance that puts no direct flame on the pavement. If installing at lower pavement temperatures than 40°F (4°C), extreme care should be used to insure that cracks or joints are dry and free from ice and other contaminants. Product temperatures should be maintained at the maximum heating temperature recommended by the manufacture. If installing at night, ensure that dew is not forming on the pavement surface. Applied product should be checked by qualified personnel to ensure

that adhesion is adequate.

9. Measurement

Cleaning and sealing of cracks and joints shall be measured by the linear foot of cracks cleaned and sealed.

10. Payment

The accepted quantities of crack sealing, measured as provided above, will be paid for at the contract unit price per linear foot, which price shall be full compensation for the work, complete in place, with no allowance for waste, and shall include labor, equipment, tools, and incidentals to complete the work as prescribed and as directed by the Engineer.

No payment will be made for materials rejected due to improper placement, improper proportions of materials, or material found to be defective or out of specifications.

**\*\*\*END OF SUPPLEMENTAL SPECIFICATIONS – CRACK SEALING\*\*\***

SUPPLEMENTAL SPECIFICATIONS  
SLURRY SEAL TYPE II AND TYPE III

I. GENERAL: The City of Glendale adopted the "Uniform Standard Specification for Public Works Construction", which are sponsored and distributed by the Maricopa Association of Governments. These documents, with revisions, are hereby made a part of these contract documents.

Whenever in the Uniform Standards Specification, the words "the contracting agency" is used, the meaning shall be the City of Glendale.

In all cases where ASTM, ASSHTO, A WW A, USAS, Federal, City of Phoenix, MAG Specifications, Maricopa County, Arizona State Highway, or other standard specifications are referred to, unless otherwise stated, revision, supplements or addenda issued on or before the date of this contract, shall prevail.

In the event of any conflict between these project specifications and the requirements of the plans, detail drawing, MAG Standard Details and Specifications, these project specifications shall prevail.

II. CONSTRUCTION SPECIFICATIONS  
*SLURRY SEAL TYPE II AND TYPE III*

1. Description

Polymer Modified Slurry Seal shall consist of mixing a polymer modified cationic asphalt emulsion (LMCQS-Ih or PMCQS-Ih), aggregate, mineral filler (as needed), set-control additives (as needed), and water, spreading the mixture on a pavement surface where shown on the plans, in conformance with the provisions in these special provisions, and as directed by the Engineer. The completed Slurry Seal shall leave a homogeneous mat, adhere firmly to the prepared surface, have a uniform appearance and have a skid-resistant surface. The completed Polymer Modified Slurry Seal shall support controlled traffic in 60 minutes.

All streets identified in these bid documents and improvement exhibits to receive Single Slurry shall have Type II Slurry (as described in this specification) applied. All streets identified to receive Double Slurry shall have Type III Slurry capped with an application of Type II Slurry. See the attached improvement exhibits for slurry application areas.

The work performed and materials used in this project shall be in accordance with the Uniform Standard Specifications and Details for Public Works Construction sponsored and distributed by the Maricopa Association of Governments (MAG) with the following additions:

2. Location of Work

The streets to have polymer modified slurry seal applied are indicated on the project improvement exhibits. The slurry seal shall be applied from lip or face of gutter to lip or face of gutter and across the full pavement width on all streets indicated to have application. The estimated areas include cul-de-sacs, elbow turns and curb returns. The City reserves the right to make additions or deletions to the original quantity amount, and/or to the streets or number of streets, at the price bid per square yard.

No slurry seal application shall extend onto an arterial roadway. Slurry seal application limits shall begin from the point of curvature (PC)/curb return of the intersecting arterial, collector or local street, or the valley gutter (where applicable), on the roadways identified to be receive slurry.

3. Contractor Experience

The Contractor shall be experienced with polymer modified slurry seal. The Contractor shall submit, during the pre-construction meeting, a list of at least three, most recent, polymer modified slurry seal projects completed within the last 24 months. The project list shall show the name of the project, name of the owner, address, telephone number of an appropriate party to contact, date and square feet application in each case.

#### 4. Non-Compliance

If any two successive tests fail on the stockpile material, the job shall be stopped. It is the responsibility of the contractor, at his own expense, to prove to the City of Glendale that the conditions have been corrected. If any two successive tests on the mix from the same machine fail, the use of the machine shall be suspended. It will be the responsibility of the contractor, at his own expense, to prove to the City of Glendale that the problems have been corrected and that the machine is working properly.

- A. Test report and certifications will be made in accordance with MAG Specifications and these special provisions.
- B. Particular Section of the MAG Specifications which Apply.
- C. Specification for Polymer Modified Slurry Seal (Type II or Type III)

#### 5. Materials

The materials for polymer modified slurry seal shall conform to the following requirements

1. Emulsified Asphalt: The polymer modified cationic asphalt emulsion shall be homogenous and shall conform to the requirements of these special provisions. The polymer shall be either solid polymer milled or blended into the asphalt or latex blended into the emulsifier solution prior to the emulsification process. The polymer modified cationic asphalt emulsion shall contain a minimum of two (2) percent polymer and be either grade LMCQS-I h or PMCQS-I h as shown in these special provisions and shall conform to the following requirements when tested in conformance with the following test methods:

<b>Latex Modified Cationic Quick Set (LMCQS-1h)</b>		
<b>Tests on Emulsion</b>		
<b>Specification Designation</b>	<b>Test Method</b>	<b>Requirement</b>
Viscosity, SFS, 77°F, seconds	AASHTO T 59	15-100
Sieve Test, %	AASHTO T 59	0.10 max.
Storage Stability, 24 hr, %	AASHTO T 59	1.0 max
Particle Charge	AASHTO T 59	Positive
Residue by Evaporation, %	AASHTO T 59	60 min.

<b>Tests on Residue from Vacuum Distillation (Ariz. 504)</b>		
<b>Specification Designation</b>	<b>Test Method</b>	<b>Requirement</b>
Penetration, 77°F, 100g, 5s, dmm	AASHTO T 49	20-90
Ring and Ball Softening Point, °F	AASHTO T 53	130 min.
Ductility, 77°F, 5cm/min, cm	AASHTO T 51	40 min.
Solubility in TCE, %	AASHTO T 44	97.5 min.
Elastic Recovery, %	AASHTO T 301	55 min.

A sample of the emulsion left undisturbed for a period of 24 hours shall show no evidence of latex separation.

<b>Polymer Modified Cationic Quick Set (PMCQS-1h)</b>		
<b>Tests on Emulsion</b>		
<b>Specification Designation</b>	<b>Test Method</b>	<b>Requirement</b>
Viscosity, SFS, 77°F, seconds	AASHTO T 59	15-100
Sieve Test, %	AASHTO T 59	0.10 max.
Storage Stability, 24 hr, %	AASHTO T 59	1.0 max
Particle Charge	AASHTO T 59	Positive

pH Test	AASHTO T 200	6.7 max
Density, 60 °F, lbs/gallon	AASHTO T 59	Report
Residue by Evaporation, %	AASHTO T 59	57 min.
<b>Tests on Residue from Vacuum Distillation (Ariz. 504)</b>		
<u>Specification Designation</u>	<u>Test Method</u>	<u>Requirement</u>
Penetration, 77°F, 100g, 5s, dmm	AASHTO T 49	35-75
Penetration, 39.2°F, 200g, 60s, dmm	AASHTO T 49	15 min.
Absolute Viscosity, 140 °F, Poise	AASHTO T 202	3000 max.
Ring and Ball Softening Point, °F	AASHTO T 53	130 min.
Ductility, 77°F, 5cm/min, cm	AASHTO T 51	100 min.
Solubility in TCE, %	AASHTO T 44	97.5 min.
Elastic Recovery, %	AASHTO T 301	55 min.

2. Water and Additives: Water shall be of such quality to be miscible with the polymer modified cationic asphalt emulsion. Additives may be used to accelerate or retard the break and set such as to insure that the applied Slurry mixture can support controlled vehicular traffic within one (1) hour after application. The kind and amount shall be determined based on the approved job mix formula and field test results as required by the Engineer. Set-control additives shall not adversely affect the polymer modified slurry seal.
3. Mineral filler shall be Portland cement or hydrated lime that is free of lumps. Portland cement shall be Type I, Type II, or combination thereof. The type of mineral filler shall be determined by the Contractor based on laboratory evaluation to develop the job mix formula.
4. Aggregate: The mineral aggregate used shall be of the type and grade specified for the particular use of the polymer modified slurry seal. Mineral aggregate shall consist of sound and durable crushed gravel or crushed stone. The material shall be free from organic matter and other deleterious materials. Aggregates shall be 100% crushed material with no rounded particles. All aggregate shall be free of caked lumps and oversize particles. No natural sand will be allowed.

The aggregate, prior to the addition of emulsion shall conform to the requirements of this section. If aggregates are blended each component aggregate shall meet the sand equivalency and abrasion resistance and shall be 100% crushed. The percentage composition by mass of the aggregate shall conform to the following grading requirements when tested in conformance with AASHTO T 11 and T 27.

<b>TYPE II</b>	
<u>Sieve Sizes</u>	<u>Percentage Passing</u>
3/8" (9.5-mm)	100
No. 4 (4.75-mm)	90-100
No. 8 (2.36-mm)	65-90
No. 16 (1.18-mm)	45-70
No. 30 (600- $\mu$ m)	30-50
No. 50 (300- $\mu$ m)	18-30
No. 100 (150- $\mu$ m)	10-21
No. 200 (75- $\mu$ m)	5-15

<b>TYPE III</b>	
<u>Sieve Sizes</u>	<u>Percentage Passing</u>
3/8" (9.5-mm)	100
No. 4 (4.75-mm)	70-90
No. 8 (2.36-mm)	45-70
No. 16 (1.18-mm)	28-50
No. 30 (600- $\mu$ m)	19-34
No. 50 (300- $\mu$ m)	12-25
No. 100 (150- $\mu$ m)	7-18

No. 200 (75- $\mu$ m)

5-15

The aggregate shall conform to the following quality requirements:

Test	Test Method	Requirement
Sand Equivalent	AASHTO T 176	60 min.
Plastic Limit	AASHTO T 89/T90	Non-Plastic
Percentage of Crushed Particles	Ariz. 212	100% min.
Los Angeles Abrasion Loss at 500 Rev.	AASHTO T 96	35% max.

Notes: Los Angeles Abrasion shall be performed on the source aggregate before crushing. Source testing performed within the last 12 months may be provided by the aggregate supplier.

### 5.1 Job Mix Formula

All materials shall be pre-tested in a certified laboratory, selected by the City, as to the materials suitability for use in the Polymer Modified Slurry Seal. At least seven (7) working days before the polymer modified slurry seal placement commences, the contractor shall submit for approval of the Engineer a laboratory report of tests and a proposed Job Mix Formula covering the specific materials proposed for use on the project. The Job Mix Formula proposed shall be reviewed and sealed by a registered Professional Engineer in the State of Arizona.

The percentages of each individual material proposed in the Job Mix Formula shall be shown in the laboratory report. Individual materials shall be within the following limits:

Material	Limit
Residual Asphalt (Type II)	7.5% to 13.5% by Dry Mass of Aggregate
Residual Asphalt (Type III)	6.5% to 12.0% By Dry Mass of Aggregate
Mineral Filler	0% to 3% By Dry Mass of Aggregate
Additive	As Needed
Water	As Needed

Adjustments may be required during construction based on field conditions.

1. Specifications: The Job Mix Formula and aggregate tests shall be performed by a laboratory capable of performing the applicable International Slurry Surfacing Association (ISSA) tests. The proposed polymer modified slurry seal mixture shall conform to the specified requirements when tested in conformance with the following tests:

Test	ISSA Test Method	Requirements
Wet Cohesion, kg-cm @ 30 Minute (Set) @ 60 Minute (Traffic)	TB* 139	12 min. 20 min.
Excess Asphalt by Monolayer Loaded Wheel Test, g/ft <sup>2</sup>	TB* 109	50 max.
Wet Stripping, %	TB* 114	90 min.
Consistency, cm	TB* 106	2-3
Wet Track Abrasion, g/ft <sup>2</sup> 1-hour Soak Loss 6-day Soak Loss	TB* 100	50 max. 75 max.
Mix Time @ 77°F, seconds	TB* 113	180 min.

TB\* = Technical Bulletin

The laboratory that performed the tests and designed the mixture shall sign and seal the laboratory Job Mix Formula report. The report shall show the results of the tests on individual materials and shall compare their values to those required by these special provisions. The report shall clearly show the

proportions of aggregate, filler, water, set control additive, and polymer modified cationic asphalt emulsion solids content (minimum and maximum) based on the dry mass of aggregate. The laboratory shall report the quantitative effects of moisture content on the unit mass of the aggregate (bulking effect) in conformance with the requirements of ASTM Designation C 29M. Previous laboratory reports covering the same materials may be accepted provided the material test reports were completed within the previous 12 months.

The component materials used in the Job Mix Formula shall be representative of the polymer modified slurry seal materials proposed by the Contractor for use on the project.

Once the Job Mix Formula is approved by the Engineer, no substitution of other material will be permitted unless the materials proposed for substitution are first tested and a laboratory report is submitted for the substituted design in conformance with these special provisions. Substituted materials shall not be used until the Job Mix Formula for those materials has been approved by the Engineer.

The completed mixture, after addition of water and set control additives, if used, shall be such that the polymer modified slurry seal mixture has proper workability. At the expiration of the road closure time, in conformance these special provisions, the polymer modified slurry seal mixture shall be sufficiently cured to support unrestricted traffic.

## 5.2 Material Sampling and Quality Acceptance

The minimum acceptable sampling frequency shall be at the Engineers direction and shall include:

Polymer Modified Cationic Asphalt Emulsion  
Mineral Aggregate  
Polymer Modified Slurry Seal Mixture

1. Polymer Modified Cationic Asphalt Emulsion shall be tested for compliance to the applicable specification in this special provision. At the Engineers discretion the polymer modified cationic asphalt emulsion can be tested for compliance with selected performance indicating portions of the specification.
2. The mineral aggregate shall be tested for gradation and Sand Equivalent in accordance with these special provisions.
3. The polymer modified slurry seal mixture shall be tested for Wet Cohesion, Wet Track Abrasion Loss (1-hour and 6-day soaks) and Excess Asphalt. Additional testing for residential asphalt content may be requested by the Engineer.

<b>Test</b>	<b>ISSA Test Method</b>	<b>Requirements</b>
Wet Cohesion, kg-cm @ 30 Minute (Set)	TB* 139	12 min.
Excess Asphalt by Monolayer Loaded Wheel Test, g/ft <sup>2</sup>	TB* 109	50 max.
Wet Track Abrasion, g/ft <sup>2</sup> 1-hour Soak Loss 6-day Soak Loss	TB* 100	50 max. 75 max.
Residue Asphalt Content	AASHTO T164	Range from Job Mix Formula

TB\* = Technical Bulletin

4. Sampling: Samples of polymer modified cationic asphalt emulsion shall be obtained from the job site storage tank or the polymer modified slurry seal application truck. Aggregate samples shall be obtained from the project stockpile. Inspector shall observe the sampling of one (1) gallon of the emulsion and a representative sample of slurry seal aggregate. Contractor shall provide the samples and container to the inspector. Sampling of the polymer modified cationic asphalt emulsion shall be in accordance with AASHTO T40. Sampling of the mineral aggregate shall be in accordance with AASHTO T2.

Samples of the polymer modified slurry seal mixture shall be obtained from the pug mill discharge prior to the polymer modified slurry seal entering the lay down box and shall be of adequate size to fabricate all test specimens from one sample.

The Engineer or his representative shall be permitted to take samples of materials from the project at any time. The City may elect to perform testing on the samples to verify compliance of the materials with the Specifications.

5. Testing shall be under taken by the Engineer whenever deemed necessary. The Engineer, or his representative, may suspend the application of the polymer modified slurry seal whenever changes in the materials or quality of the applied polymer modified slurry seal are noted. Work shall resume only when the noted deficiencies are corrected to the satisfaction of the Engineer. When work is suspended for this reason, samples will be taken immediately.

The Engineer may send samples to a testing laboratory. Testing will be at the City's expense unless deficiencies are verified by the testing. The contractor shall reimburse the City for the cost of any testing required by deficient materials or application of the polymer modified slurry seal.

### 5.3 Proportioning

Aggregate, mineral filler, polymer modified cationic asphalt emulsion, water, and additives, including the set-control agent, if used, shall be proportioned by volume utilizing the Job Mix Formula approved by the Engineer. If more than one kind of aggregate is used, the collect amount of each kind of aggregate to produce the required grading shall be proportioned separately, prior to adding the other materials of the mixture, in a manner that will result in a uniform and homogeneous blend.

1. The aggregate shall be proportioned using a belt feeder operated with an adjustable cutoff gate. The height of the gate opening shall be determinable. The polymer modified cationic asphalt emulsion shall be proportioned by a positive displacement pump. Variable rate emulsion pumps, if used, shall be calibrated and sealed in the pump's calibrated condition in conformance with ISSA MA-I standards

The delivery rate of aggregate and polymer modified cationic asphalt emulsion per revolution of the aggregate feeder shall be calibrated at the appropriate gate settings for each mixer-spreader truck used on the project in conformance with ISSA MA-I and in conformance with the provisions of these special provisions.

The aggregate belt feeder shall deliver aggregate to the pugmill with such volumetric consistency that the deviation for any individual aggregate delivery rate check-run shall not exceed 2.0 percent of the mathematical average of 3 runs of at least three tons each. The emulsion pump shall deliver polymer modified cationic asphalt emulsion to the pugmill with such volumetric consistency that the deviation for any individual delivery rate check-run shall be within 2.0 percent of the mathematical average of 3 runs of at least 300 gallons each. The water pump shall deliver water to the pugmill with such volumetric consistency that the deviation for any individual delivery rate check-run shall be within 2.0 percent of the mathematical average of 3 runs of at least 300 gallons each.

2. The polymer modified cationic asphalt emulsion storage tank shall be located immediately before the emulsion pump and shall be equipped with a device which will automatically shut down the power to the emulsion pump and aggregate belt feeder when the polymer modified cationic asphalt emulsion level is lowered to a point where the pump suction line is exposed.

A temperature-indicating device shall be installed in the emulsion storage tank at the pump suction level. The device shall indicate the temperature of the polymer modified cationic asphalt emulsion and shall be accurate to within 10°F.

3. The belt delivering the aggregate to the pugmill shall be equipped with a device to monitor the depth of aggregate being delivered to the pugmill. The device for monitoring the depth of aggregate shall automatically shut down the power to the aggregate belt feeder whenever the depth of aggregate is less than the target depth of flow. A second device shall be located where the device will monitor the movement of the aggregate belt by detecting revolutions of the belt feeder. The devices for monitoring no flow or belt movement shall automatically shut down the power to the aggregate belt when the aggregate belt movement is interrupted. The device to detect revolutions of the belt feeder will not be required where the aggregate delivery belt is an integral part of the drive chain. To avoid erroneous shutdown by normal fluctuation, a delay of 3 seconds will be permitted between sensing and shutdown of the operation.

## 6. Mixing and Spreading Equipment

The polymer modified slurry seal shall be mixed in a continuous flow pugmill mixer of adequate size and power for the type of polymer modified slurry seal to be placed. The aggregate shall be pre-wet immediately prior to mixing with the emulsion. The mixing unit of the mixing chamber shall be capable of thoroughly blending all ingredients together. No violent mixing shall be permitted. An approved fines feeder that provides an accurate metering device or method to introduce a predetermined amount of mineral filler into the mixer at the same time and location that the aggregate is fed will be required. The mixing machine shall be equipped with a water pressure system and fog type spray bar, adequate for complete water fogging of the surface preceding the spreading equipment. The rate of application of the water shall be adjusted during the day to suit temperatures, surface texture, humidity, and dryness of the pavement surface to insure that the entire surface is damp with no apparent flowing water in front of the slurry box. Indicators shall be in conformance with the provisions of these special provisions and shall be in working order prior to commencing mixing and spreading operations.

Mixer-spreader trucks shall be equipped to proportion the polymer modified cationic asphalt emulsion, water, aggregate, mineral filler, and set-control additives by volume. Rotating and reciprocating equipment on mixer-spreader trucks shall be covered with metal guards.

The mixer-spreader truck shall not be operated unless low-flow and no-flow devices and revolution counters are in good working condition and functioning and metal guards are in place. Indicators required by these special provisions shall be visible while walking alongside the mixer-spreader truck.

Aggregate feeders shall be connected directly to the drive on the emulsion pump. The drive shaft of the aggregate feeder shall be equipped with a revolution counter reading to the nearest one-tenth of a revolution.

Calibration: Each slurry mixing unit to be used in performance of the work shall be calibrated specifically for the contract prior to construction. Previous calibration documentation covering the exact materials to be used will not be accepted. The documentation shall include an individual calibration of each material at various setting, which shall be related to the machine metering device(s). No machine will be allowed to work on the project until the calibration has been completed and/or accepted.

### 6.1 Spreader Box:

The polymer modified slurry seal mixture shall be spread by means of a spreader box conforming to the following requirements:

The spreader box shall be capable of placing the polymer modified slurry seal a minimum of 12 feet wide and shall have strips of flexible rubber belting or similar material on each side of the spreader box and in contact with the pavement to prevent the loss of polymer modified slurry seal from the box. Spreader box skids shall be maintained in such manner as to prevent chatter (wash boarding) in the finished mat. The spreader box in use shall be clean and free of polymer modified slurry seal and polymer modified cationic asphalt emulsion at the start of each work shift.

1. The spreader box shall have a series of strike-off devices at the rear of the box. The leading

strike-off device shall be fabricated of steel, stiff rubber or other suitable material. The number of strike-off devices shall be determined by the Contractor. The first strike-off device shall be designed to maintain close contact with the pavement during the spreading operations, shall obtain the thickness required, and shall be capable of being adjusted to the various pavement cross sections for application of a uniform polymer modified slurry seal finished surface. The final strike-off device shall be fabricated of flexible material suitable for the intended use and shall be designed and operated to ensure a uniform texture is achieved in the finished surface of the polymer modified slurry seal. The final strike-off device shall be cleaned or changed daily if problems with longitudinal scouring occur.

2. Hand Work: Areas which cannot be reached with the slurry seal machine shall be surfaced using hand squeegees (36-inches wide) to provide complete and uniform slurry seal coverage and finish in the direction as applied with a burlap mop. Contractor shall provide the necessary hand tools and any support equipment which is exclusive to the slurry seal operation

#### 7. Preparation for Polymer Modified Slurry Sealing

Before placing the polymer modified slurry seal, The Contractor shall be responsible for clearing the street of any obstruction (low hanging tree limbs, trash piles, etc.) interfering with the completion of the contract. The pavement surface shall be cleaned by sweeping with PM-I0 efficient type self-propelled pick up sweeper, flushing or by other means necessary to remove loose particles of paving, dirt, vegetation and other objectionable material.

All areas will be swept to the satisfaction of the inspector.

1. A paint binder (tack coat) of asphaltic emulsion shall be applied to all Portland cement concrete surfaces when there is a contract item for the work or when the work is required in these special provisions. The asphaltic emulsion for paint binder (tack coat) shall be grade SS1, SS1h, CSS1 or CSS1h and shall conform to the provisions of AASHTO M-140 or AASHTO M 208 "Emulsified Asphalts". The asphaltic emulsion shall be mixed in the proportion of one part of emulsion (which contains up to 43 percent water) to 3 parts water. The mixture shall be applied at the approximate rate of 0.04 -0.08 g/sqyd. When asphaltic emulsion is used as a paint binder (tack coat), polymer modified slurry seal shall not be placed until the asphaltic emulsion has cured.

#### 8. Placing:

The polymer modified slurry seal mixture shall be uniformly spread on the existing surfacing within the rate specified without spotting, re-handling or otherwise shifting of the mixture.

1. The polymer modified slurry seal mixture shall not be placed when the ambient temperature is below 50 of or during unsuitable weather. Polymer modified slurry seal shall not be placed if rain IS imminent or if there is the possibility that there will be freezing temperatures within 24 hours.
2. Polymer modified slurry seal shall be spread at a rate within the following ranges of pound of dry aggregate per square yard.

Aggregate Type	Location	Spread Rate (lbs/vd <sup>2</sup> )
Type II	Full Traffic Width	12-18
Type III	Full Traffic Width	18-25

Longitudinal joints shall correspond with the edges of the traffic lanes. The Engineer may permit other patterns of longitudinal joints if the patterns will not adversely affect the quality of the finished product.

3. Through traffic lanes shall be spread in full lane widths only. Longitudinal joints common to 2 traffic lanes shall be butt joints with overlaps not to exceed 3 inches. Building paper shall be placed at the transverse joints to avoid double placement of the polymer modified slurry seal. Other suitable methods to avoid double placement of the polymer modified

slurry seal will be allowed. No excessive buildup, uncovered areas, or unsightly appearance shall be determined on longitudinal or transverse joints. Hand tools shall be available to remove spillage.

4. The mixture shall be uniform and homogeneous after placing on the surfacing and shall not show separation of the polymer modified cationic asphalt emulsion and aggregate after setting. The completed surface shall be of uniform texture and free from ruts, humps, depressions, or irregularities. No streaks, such as those caused by oversize aggregate, will be left in the finished surface. If excess oversized aggregate develops, the job will be stopped until the contractor can prove the situation has been corrected. Adequate means shall be provided to protect the polymer modified slurry seal from damage by traffic until such time that the mixture has cured sufficiently so that the polymer modified slurry seal will not adhere to or be picked up by the tires of vehicles.

Placement of the polymer modified slurry seal shall cease a minimum of one hour before the expiration of the road closure hours as specified in Section IV "Traffic Control" of these special provisions, unless the Contractor proves to the satisfaction of the Engineer that the surface will be ready for unrestricted traffic at the expiration of the road closure hours.

#### 9. Rollers

1. Rollers shall be self-propelled rubber tired rollers (9-12 ton). The roller shall be equipped with an operating water spray system. The resurfaced area shall be subjected to a minimum of two (2) full coverages by the roller. Rolling shall not commence until slurry has cured enough so that the slurry will not pick up when rolled. It shall be rolled until all ridges have been ironed out and a uniform surface is obtained.
2. Rollers shall have an operating strobe light or rotating beacon.

#### 10. Test Strip

The Contractor shall construct a test strip at the discretion of the Engineer. If required, the test strip shall be 300 feet to 500 feet long and shall consist of the application courses specified. The test strip shall be constructed at either at night time or early morning and shall cure and be open to traffic within 75 minutes of application.

1. The Engineer will evaluate the completed test strip after 12 hours of traffic on the completed test strip to determine if the mix design and placement procedure are acceptable. If the mix design or the placement procedure is determined by the Engineer to be unacceptable, the test strip will be rejected, the Contractor shall make modifications, and a new test strip shall be constructed and evaluated by the Engineer. The cost of materials and placement of the test strips, which have been rejected, shall be borne by the Contractor and will not be considered as part of the contract work. If ordered by the Engineer, rejected test strips shall be removed at the Contractors expense.

#### 11. Procedure:

The contractor shall perform the service in a safe, acceptable, workmanlike manner. Personnel shall be experienced, knowledgeable and capable in all aspects of performing the service. The same personnel that start the project shall remain on the project for the life of the project.

1. The equipment shall be in good repair and serviceable to operate in a reliable and safe manner.
2. The contractor shall place polymer modified slurry seal to the beginning and ending limits of the work as directed by the Engineer.
3. The contractor shall be responsible for providing the street cleaning, "No Parking" posting,

and traffic control. Contractor shall place signs as directed by the Engineer to notify residents of any scheduled street closures. Signs shall be constructed per plans.

4. The Contractor shall notify all emergency services residents, apartment managers, post offices, schools and businesses by handbill 48 hours in advance of any street restriction that will affect access to their property. The Contractor shall present the handbill to the Public Works Operations Manager or designee for approval, prior to its distribution to the public. The handbill will include the month (non-numeric) and dates expected for the restrictions. For Monday work, the handbill shall be distributed the preceding Thursday. For Tuesday work, the handbill shall be distributed the preceding Friday. Should work not occur or be completed on the specified day, a new handbill will be distributed by the Contractor. The cost shall be incidental to the project. Re-notification shall be a minimum of 24 hours in advance. For rain days, the Contractor may "pre-notify" the public of potential non-work in lieu of re-notification.
5. Contractor shall sand intersections as directed by the Engineer to allow traffic to cross freshly placed polymer modified slurry seal at intersections, business entrances/exits and other locations that cannot, in the estimation of the Engineer, be completely closed to traffic. Sand material will be the same aggregate used in the polymer modified slurry seal mixture.
6. The Contractor shall be responsible for all clean up of the work areas and staging areas. The Contractor shall be responsible for covering and uncovering all structure covers, such as man holes, valve, and monument covers. All street (full width and gutters) shall be swept by PM-IO efficient type self-propelled pick up sweeper no sooner than 24hrs after polymer modified slurry seal placement is complete.
7. At the end of each day's production, the contractor will provide to the Inspector a report containing the following information:
  - a. Tons of dry aggregate consumed that day
  - b. Tons of emulsion consumed that day; and
  - c. Footage covered that day.

This report shall be received no later than 10:00 a.m. of the following day.

#### 12. Area Omissions

All areas temporarily omitted by the Contractor during normal operations shall be logged and a list of the missed areas (addresses or intersections) given the inspector before the start of the next day's work.

#### 13. Clean Up

All areas, such as sidewalks, gutters, and intersections, shall have slurry seal removed as specified by the City. The Contractor shall sweep, with PM-IO efficient type self-propelled pick up sweeper, all areas surfaced not less than 24 hours after application. All areas will be swept to the satisfaction of the inspector.

#### 14. Repair of Early Distress:

If bleeding, raveling, delamination, rutting, or wash boarding occurs within 60 days after placing the polymer modified slurry seal, the Contractor shall diligently pursue repairs by any method approved by the Engineer. The Contractor shall not be relieved from maintenance until repairs have been completed.

Patching: Areas that require patching shall be full lane width or as directed by the inspector. Patching will be limited to one side of the street at a time.

### 15. Measurement

Single Slurry (Slurry Seal Type II) and Double Slurry (Slurry Seal Type III capped with application of Slurry Seal Type II) shall each be measured by the Square Yard. The quantity shall include the full pavement width area (lip or face of gutter to lip or face of gutter) on all streets identified to receive slurry seal.

### 16. Payment

The accepted quantities of Slurry Seal Type II and Type III, measured as provided above, will be paid for at the contract unit price per square yard, which price shall be full compensation for the work, complete in place, with no allowance for waste, and shall include labor, equipment, tools, and incidentals to complete the work as prescribed and as directed by the Engineer.

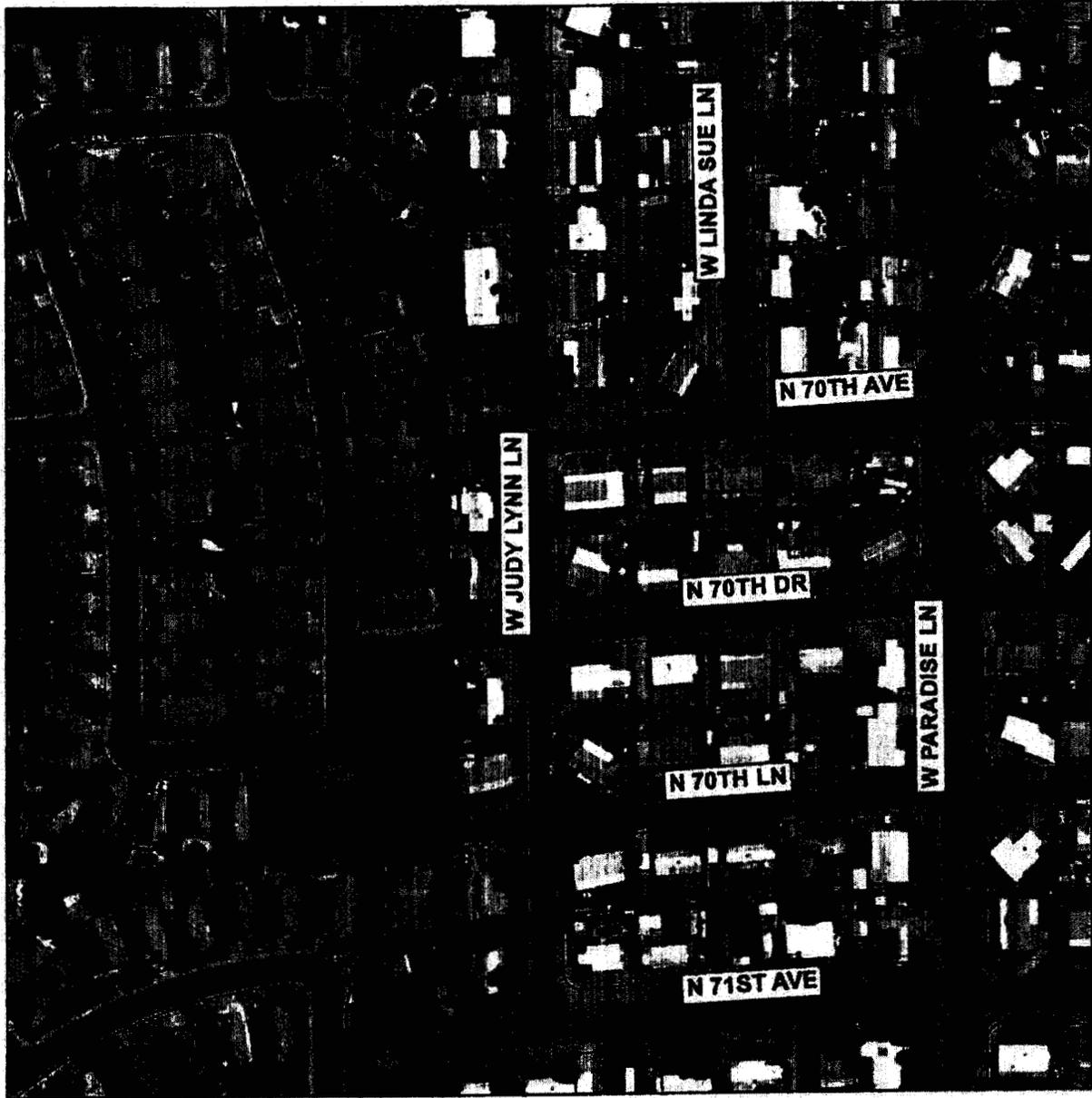
The cost of testing for and furnishing mix design, cleaning the surface, furnishing added water and set-control additives, and protecting the polymer modified slurry seal until it has set is considered incidental to this item of work.

No payment will be made for materials rejected due to improper placement, improper proportions of materials, or material found to be defective or out of specifications.

**\*\*\*END OF SUPPLEMENTAL SPECIFICATIONS – SLURRY SEAL TYPE II AND TYPE III\*\*\***

# IMPROVEMENT EXHIBIT

EXHIBIT 1 of 56



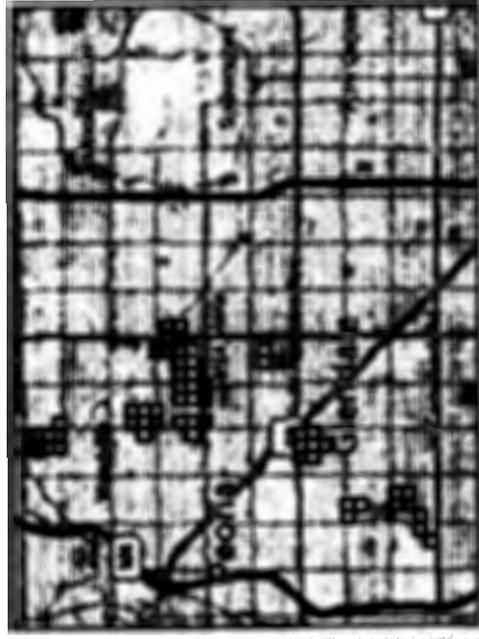
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## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
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## VICINITY MAP



Prepared For:

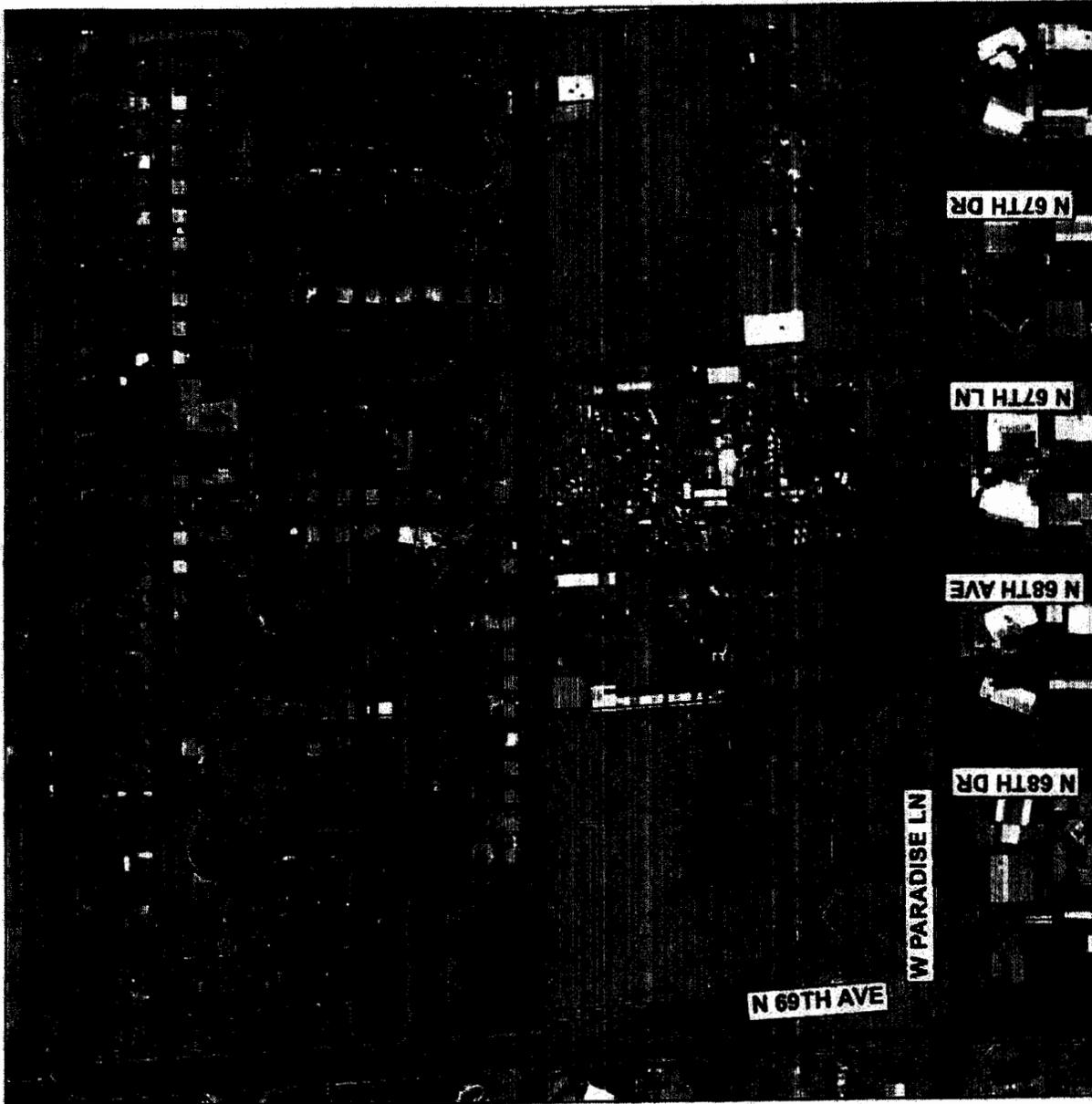


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# IMPROVEMENT EXHIBIT

EXHIBIT 2 of 56



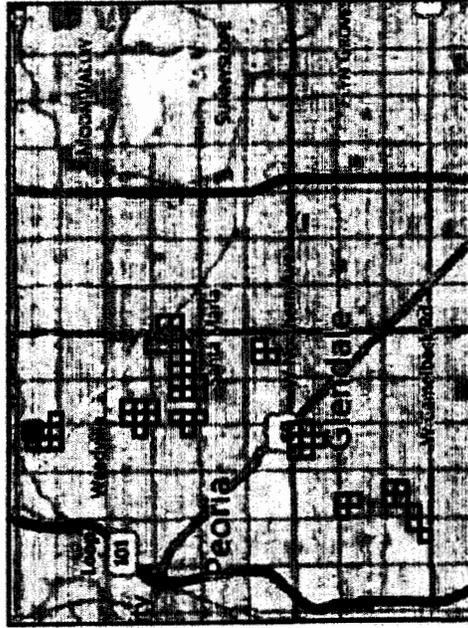
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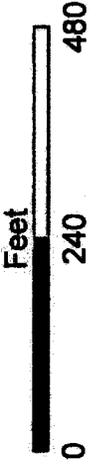
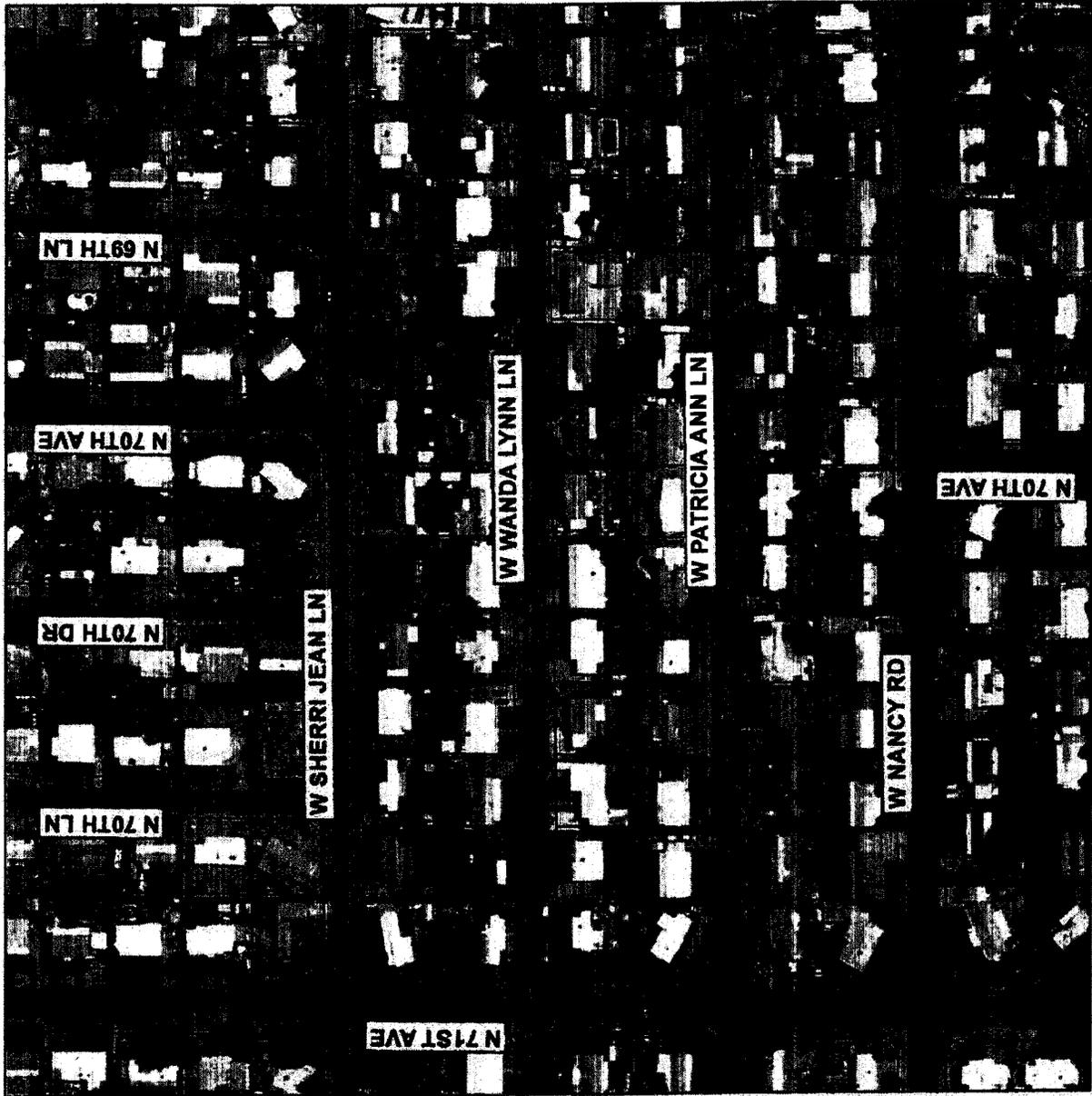
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# IMPROVEMENT EXHIBIT

EXHIBIT 3 of 56



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## VICINITY MAP



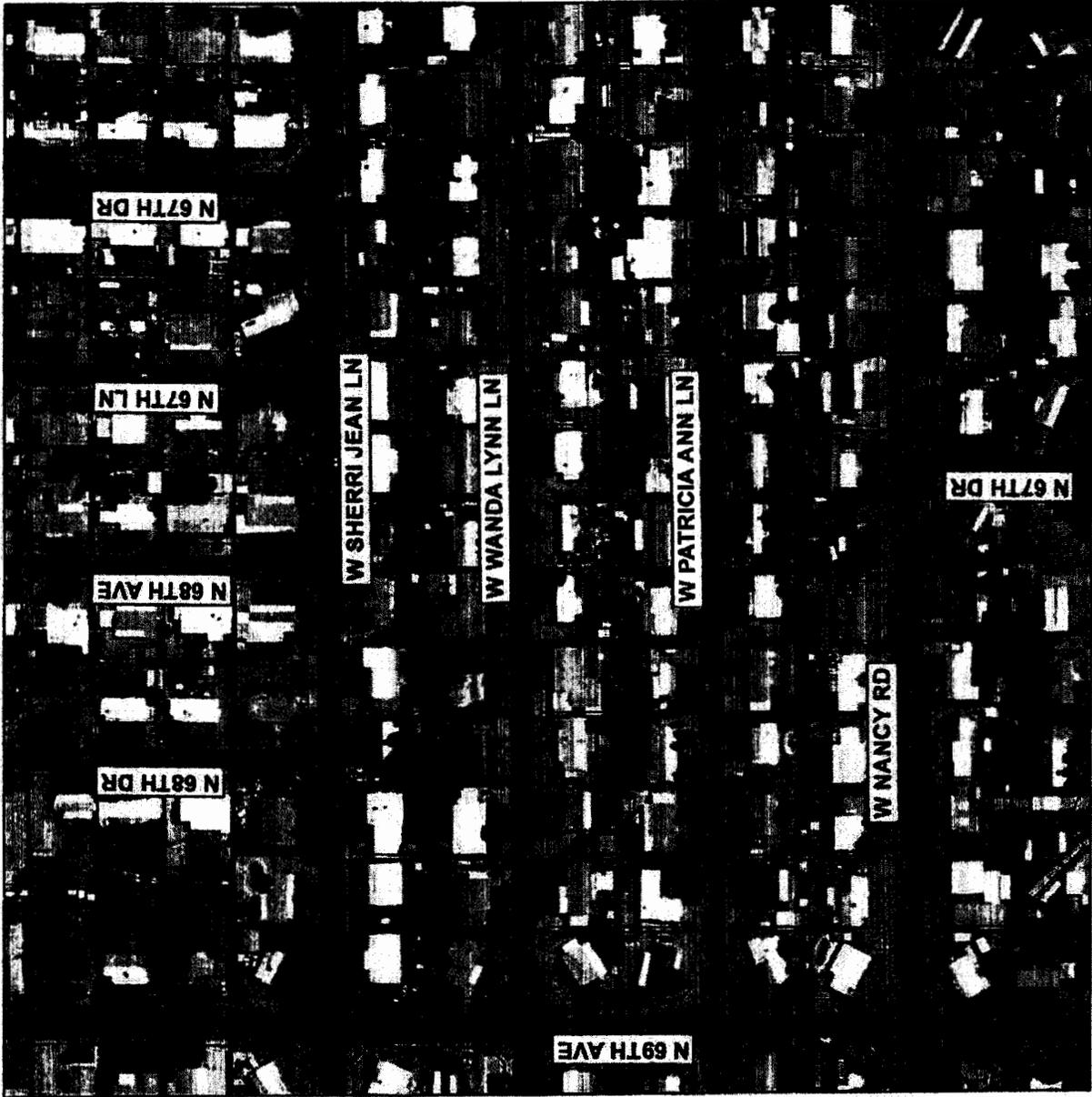
Prepared For: Prepared By:



Civil Engineering and Surveying Corporation

# IMPROVEMENT EXHIBIT

EXHIBIT 4 of 56



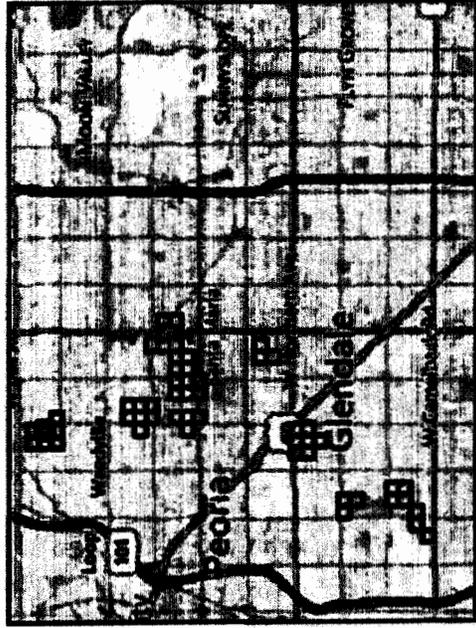
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## VICINITY MAP



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# IMPROVEMENT EXHIBIT

EXHIBIT 5 of 56



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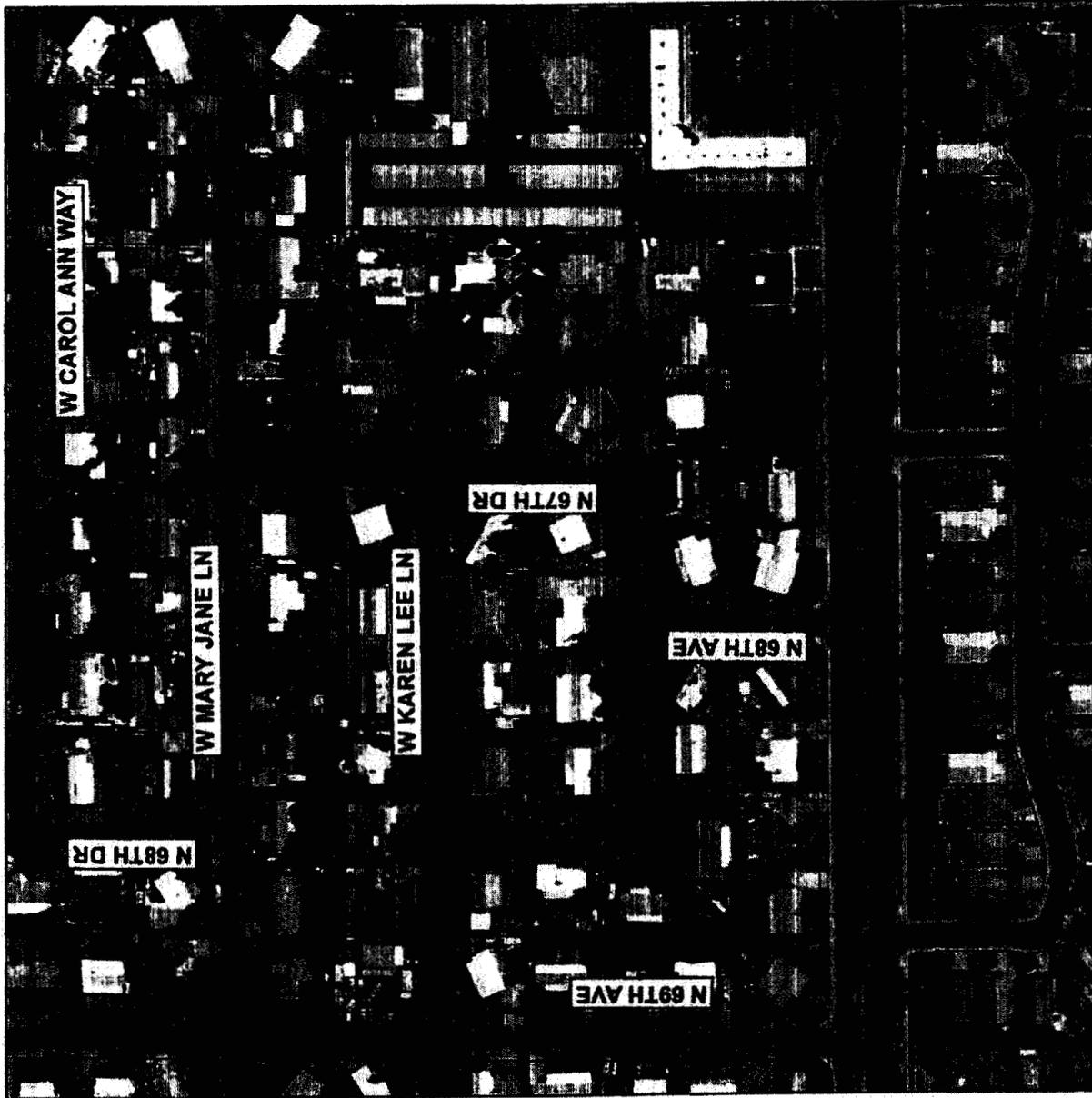
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# IMPROVEMENT EXHIBIT

EXHIBIT 6 of 56



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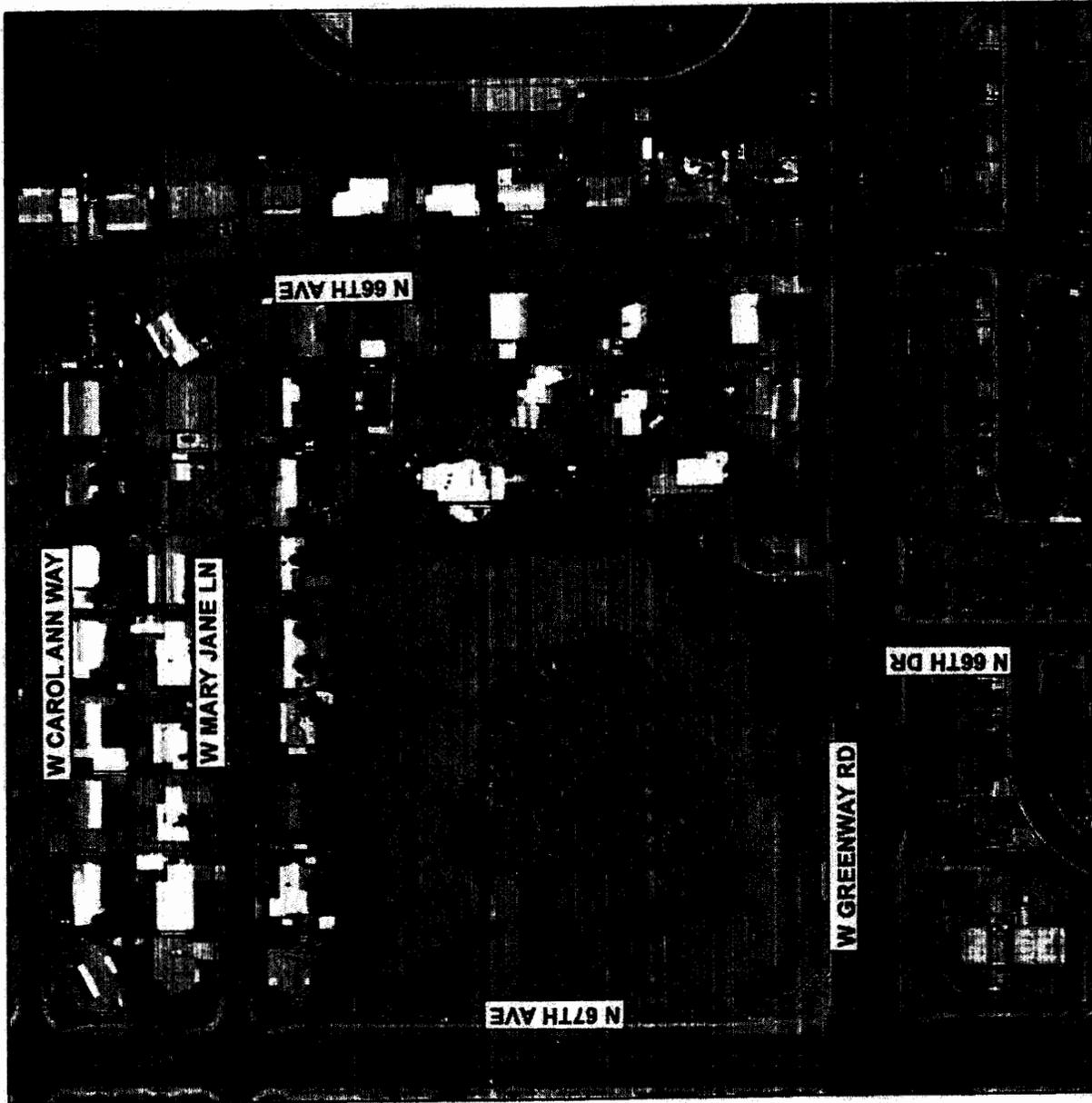


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EXHIBIT 7 of 56



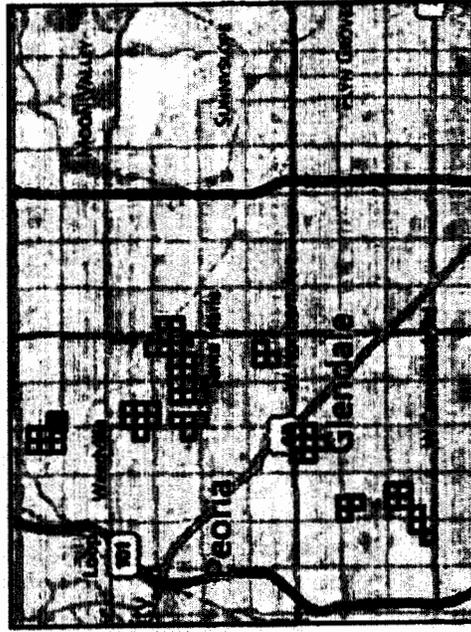
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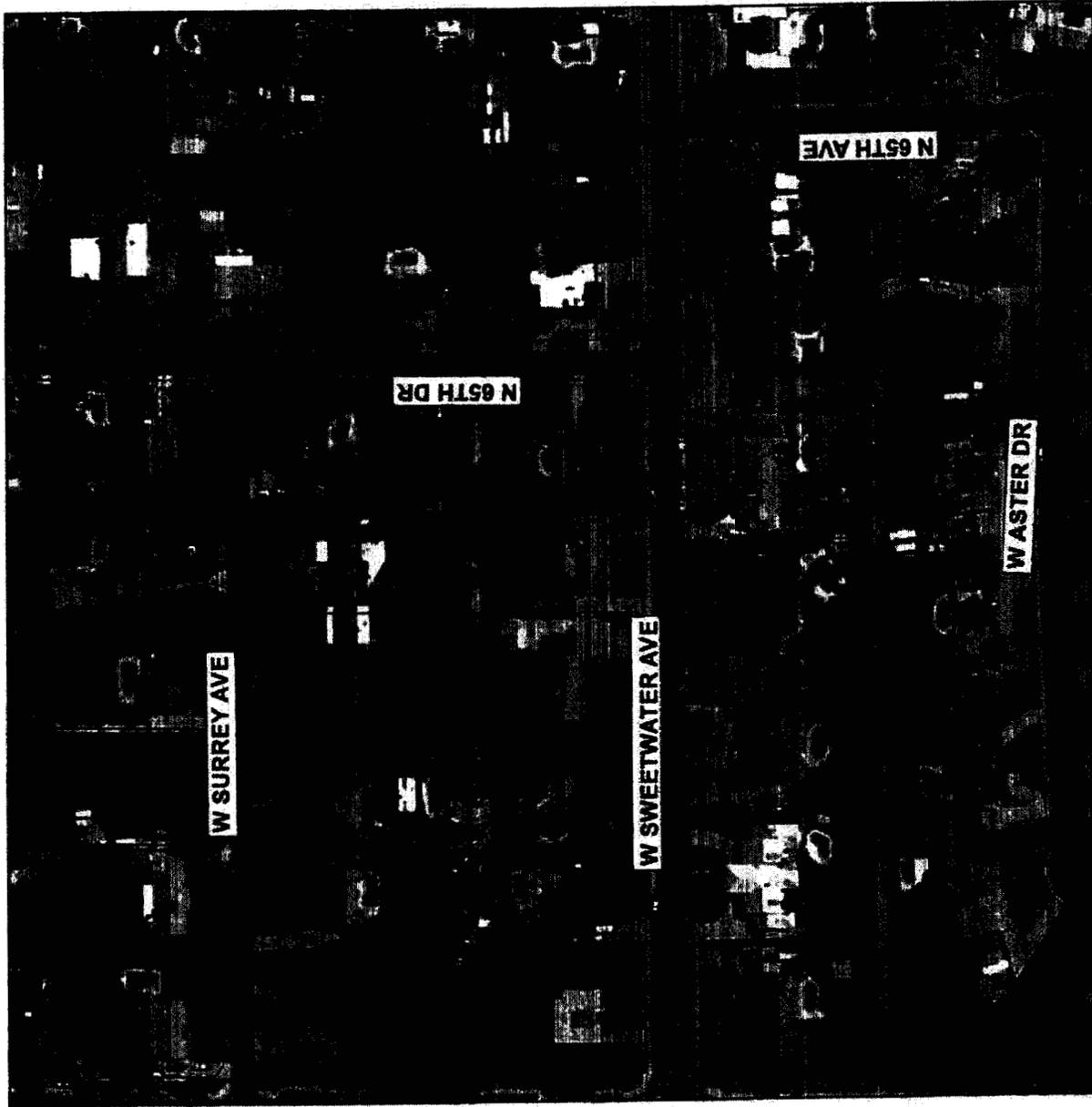
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# IMPROVEMENT EXHIBIT

EXHIBIT 8 of 56



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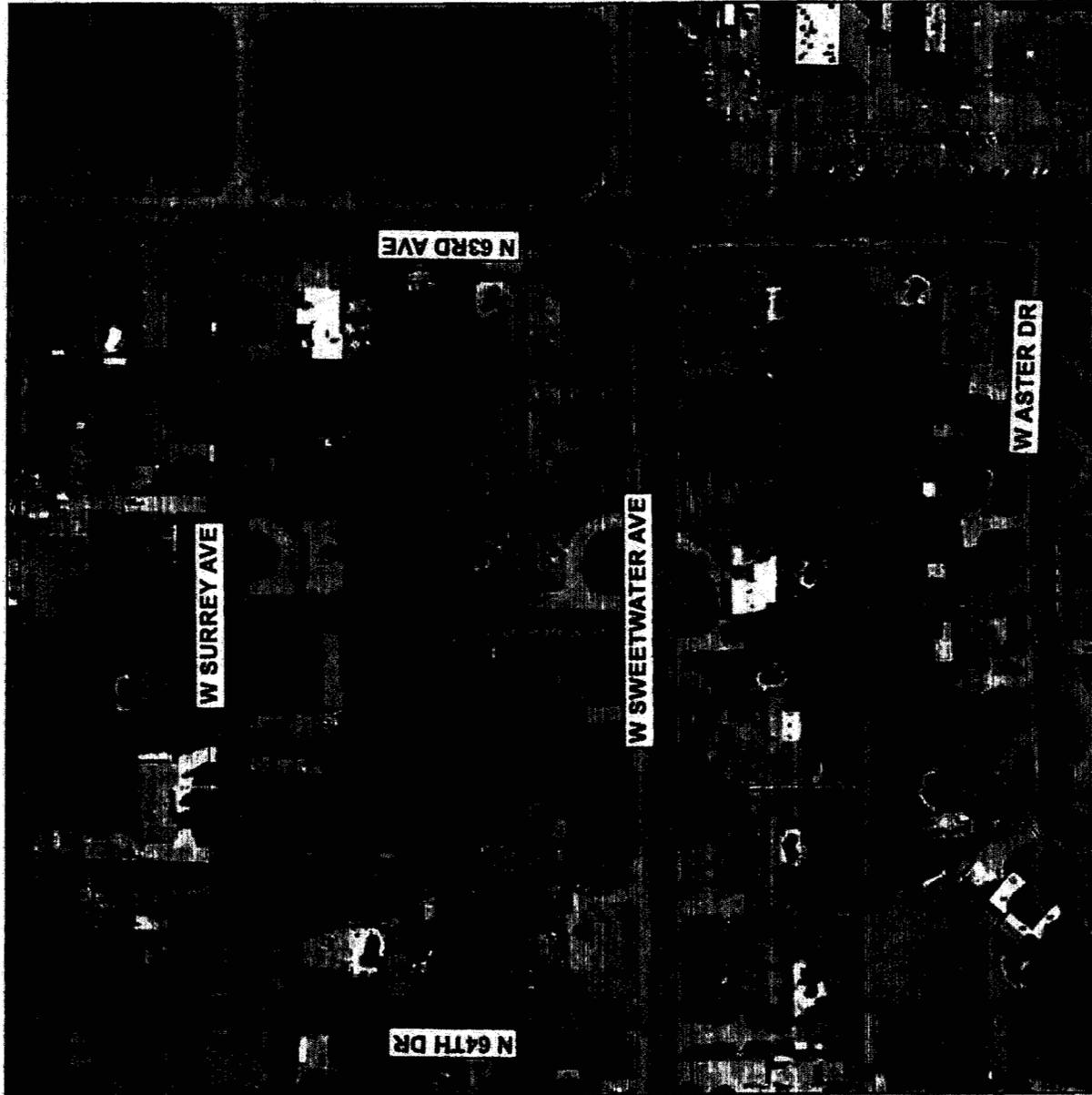


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# IMPROVEMENT EXHIBIT

EXHIBIT 9 of 56



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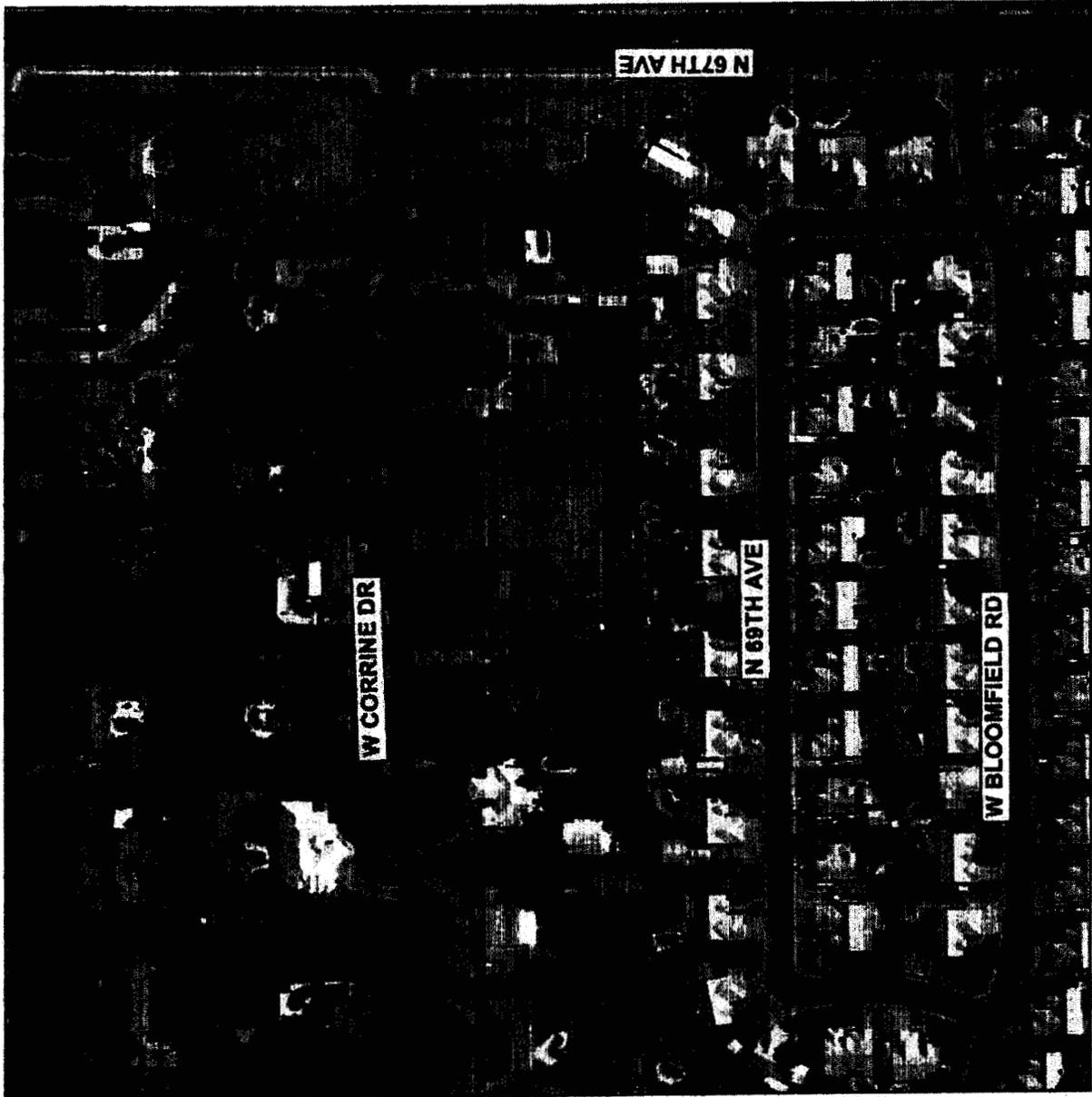
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# IMPROVEMENT EXHIBIT

EXHIBIT 10 of 56



## CONSTRUCTION NOTES:

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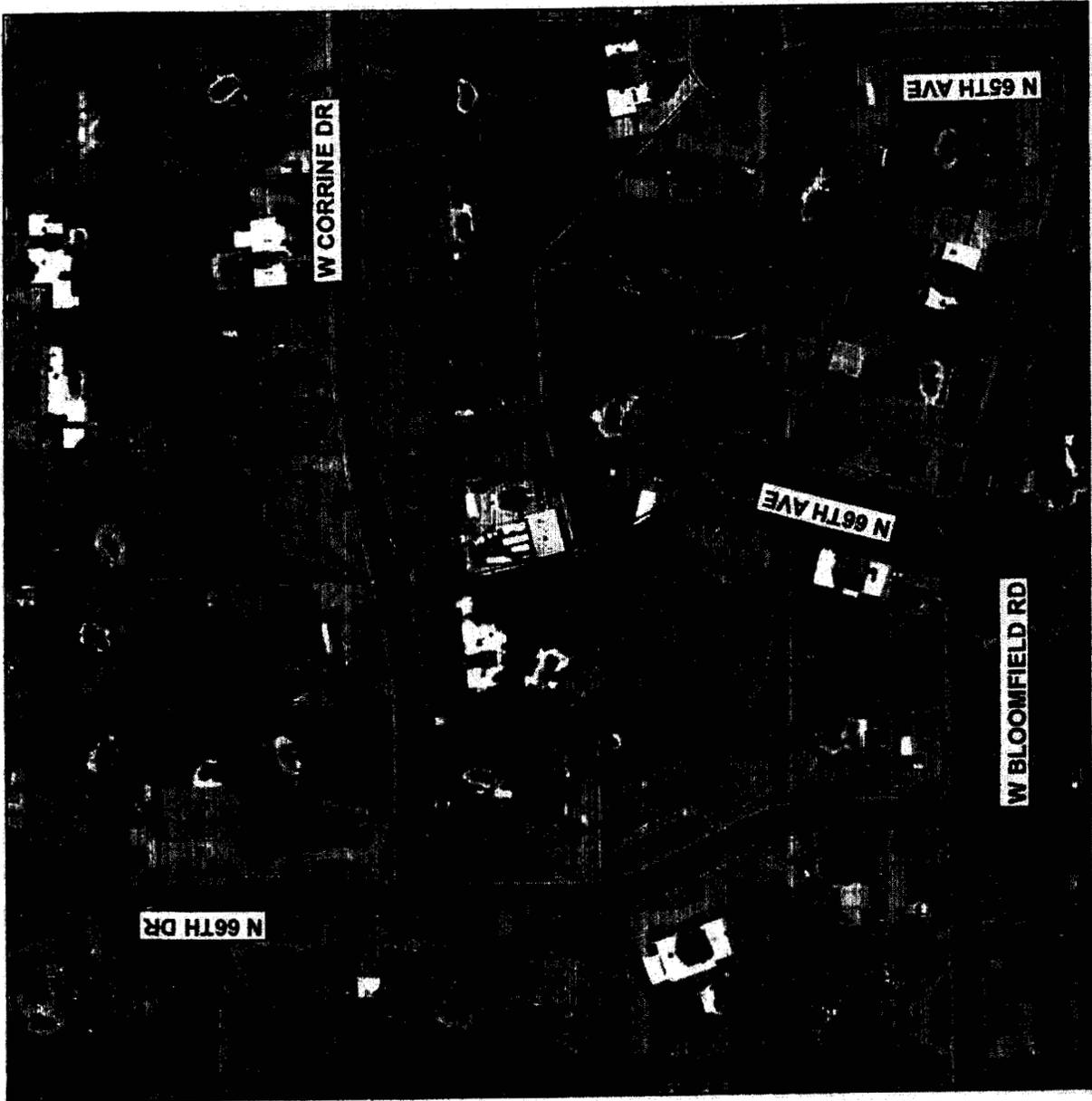
Prepared For: Prepared By:



Civil Engineering and Surveying Corporation

# IMPROVEMENT EXHIBIT

EXHIBIT 11 of 56



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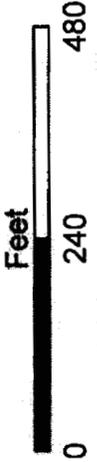


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# IMPROVEMENT EXHIBIT

EXHIBIT 12 of 56



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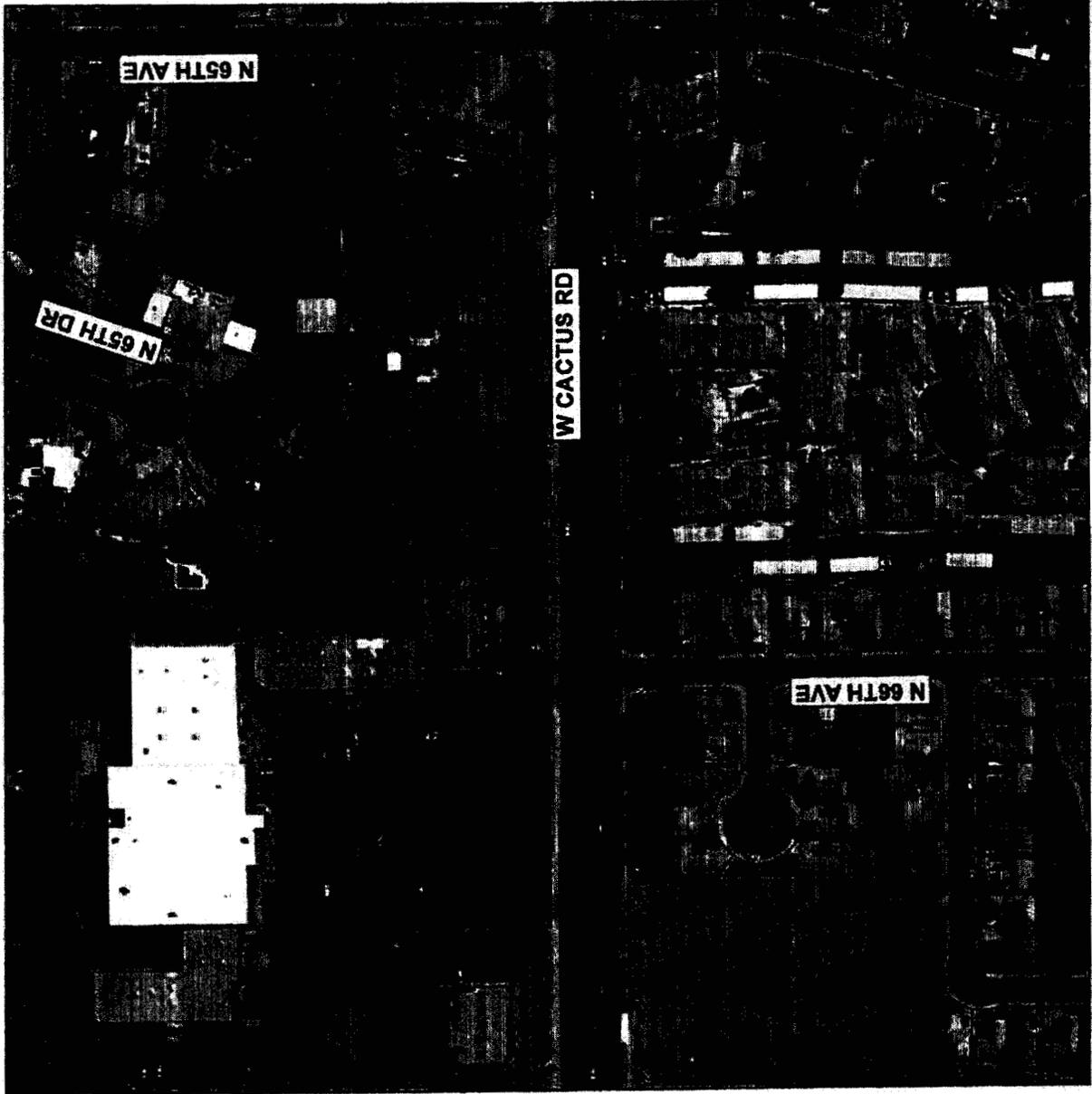
Prepared For:  Prepared By: 

GLENDALife

City of Glendale Engineering and Planning Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 13 of 56



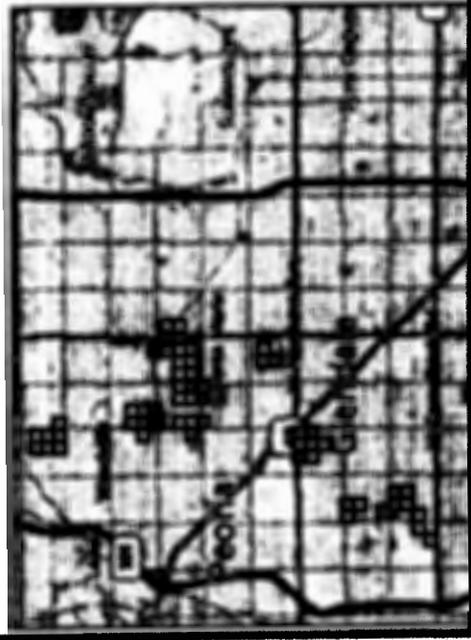
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## VICINITY MAP



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# IMPROVEMENT EXHIBIT

EXHIBIT 14 of 56



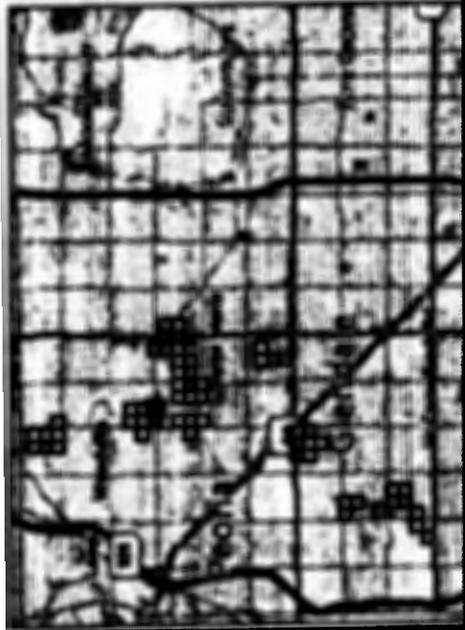
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- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
- 3) ALL STREETS IDENTIFIED TO RECEIVE DOUBLE SLURRY SHALL HAVE A TYPE III SLURRY CAPPED WITH A TYPE II SLURRY APPLIED.
- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



Prepared For: Prepared By:



GLENDALE

California Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 15 of 56



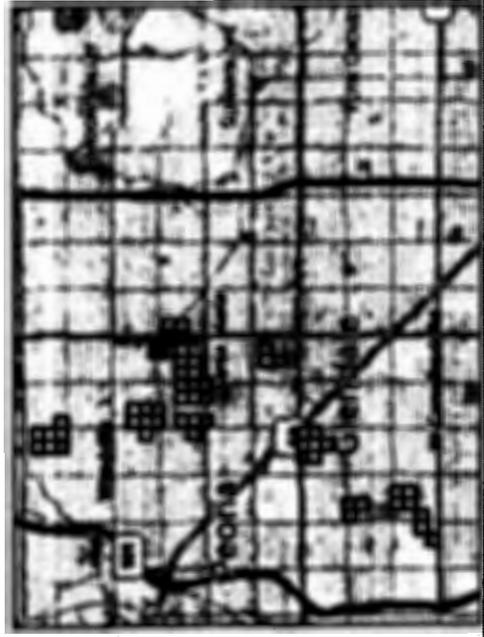
## CONSTRUCTION NOTES:

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## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



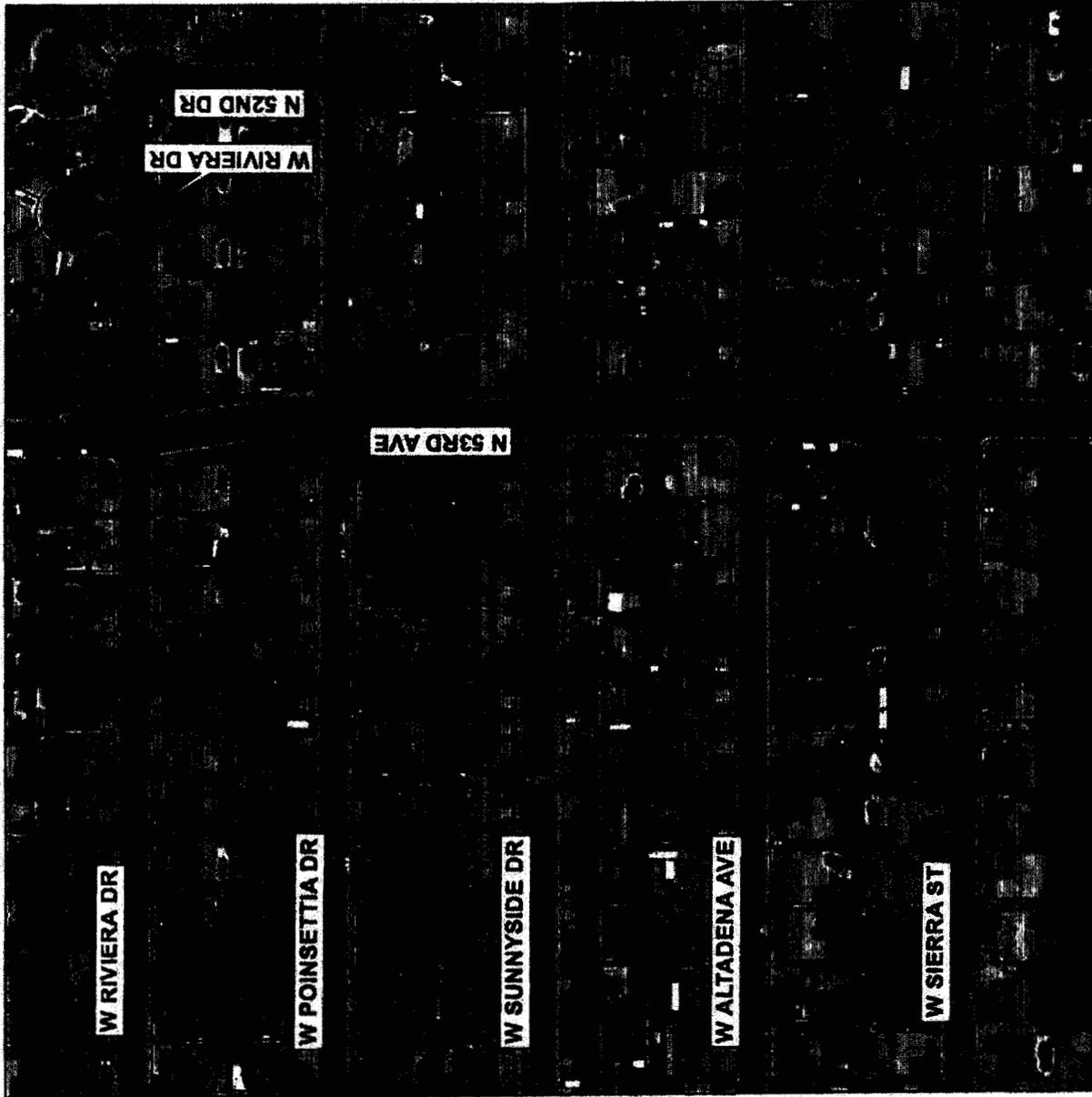
Prepared For: Prepared By:



Civil Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 16 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
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- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



Prepared For: Prepared By:

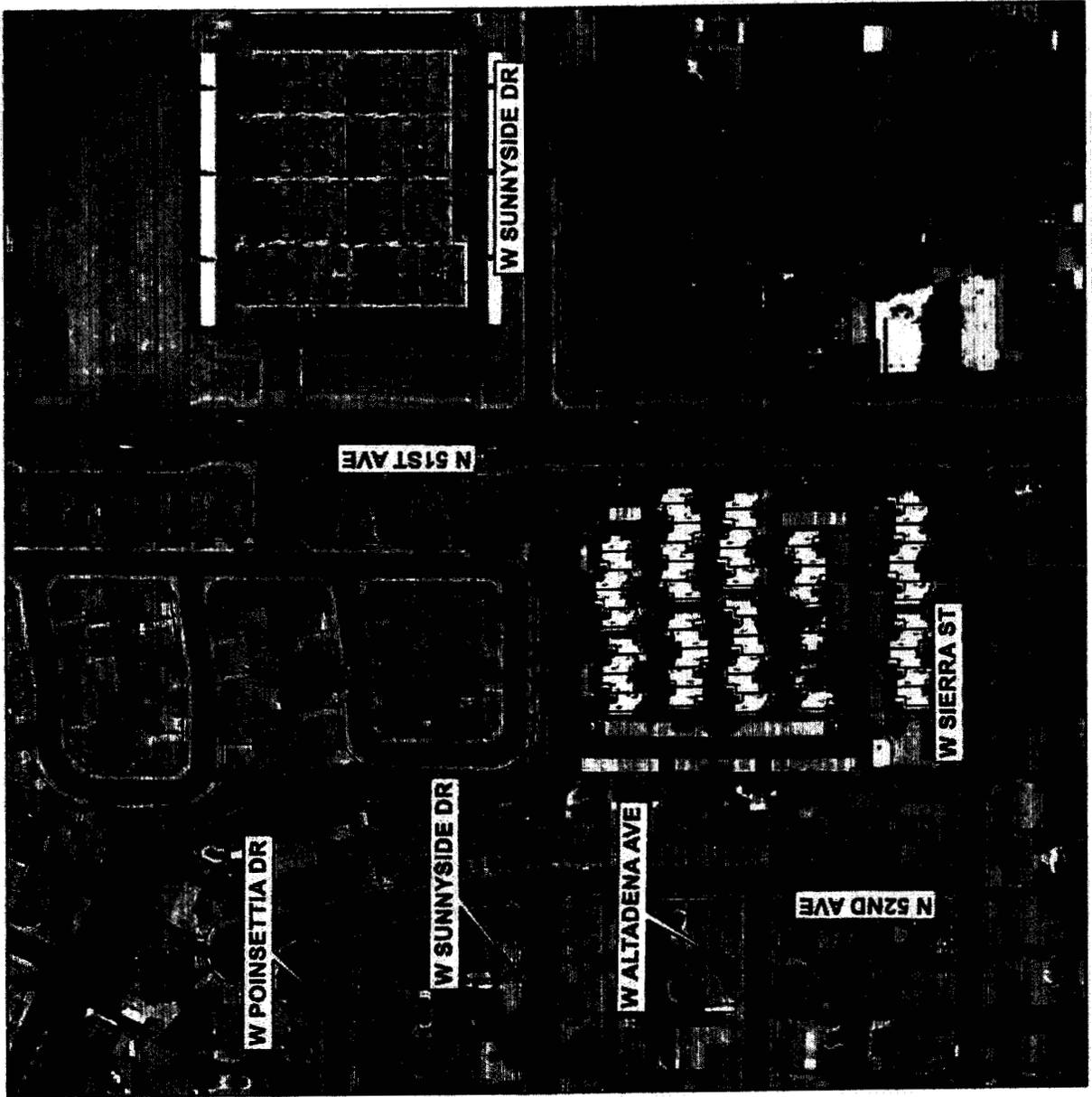


GLENDALE

Engineering and Sanitary Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 17 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
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## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



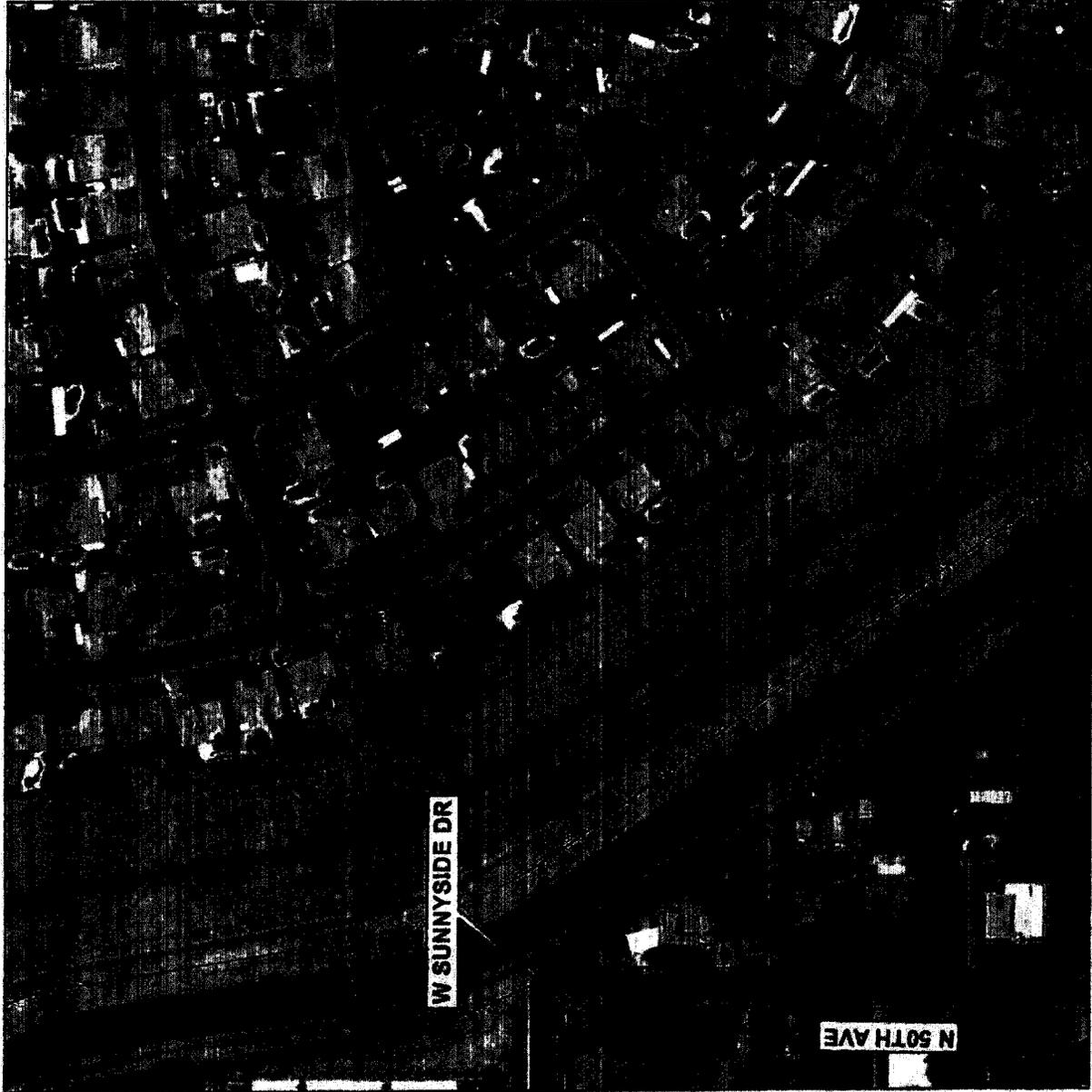
Prepared For:  Prepared By: 

**GLENDALE**

Civil Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 18 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
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- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

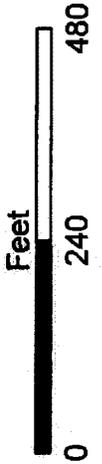
## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



Prepared For:  Prepared By: 



# IMPROVEMENT EXHIBIT

EXHIBIT 19 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
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- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



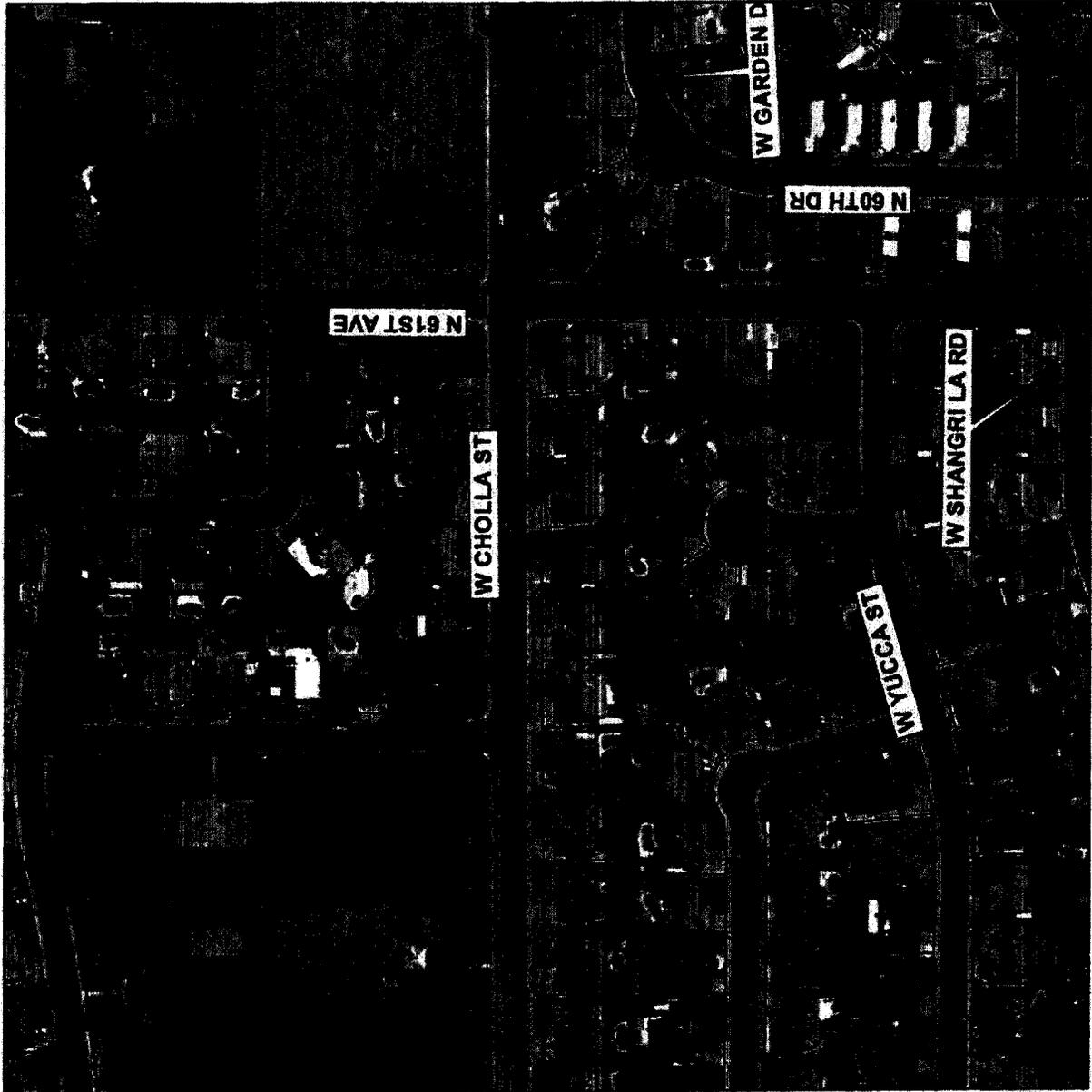
Prepared For: Prepared By:



GLENDALE  
Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 20 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
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- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

## Legend

- Asphalt\_Repair\_Areas
- Crack\_Seal\_Areas
- Single\_Slurry\_Areas
- Double\_Slurry\_Areas

## VICINITY MAP



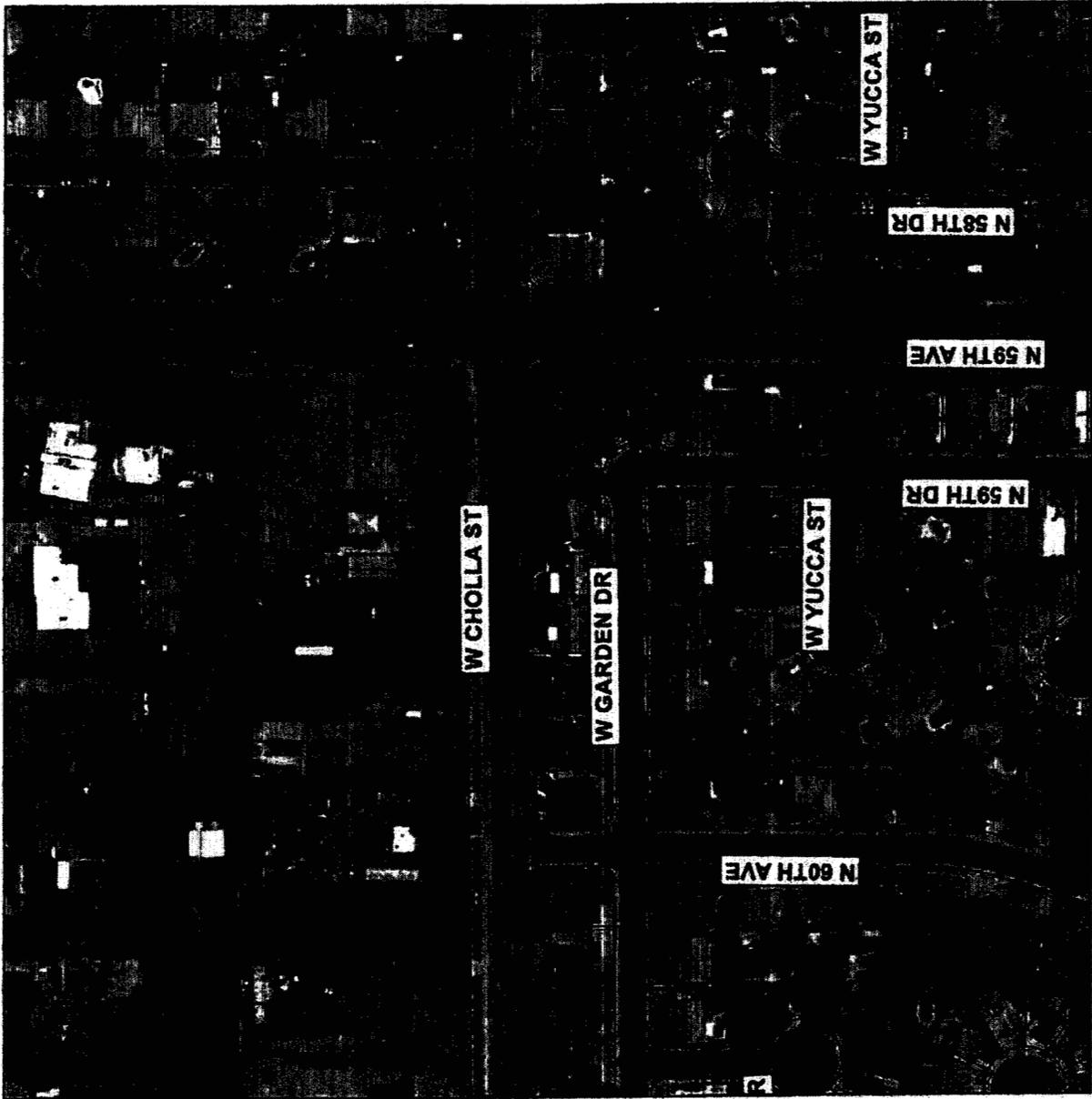
Prepared For: Prepared By:



Call Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 21 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
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## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP

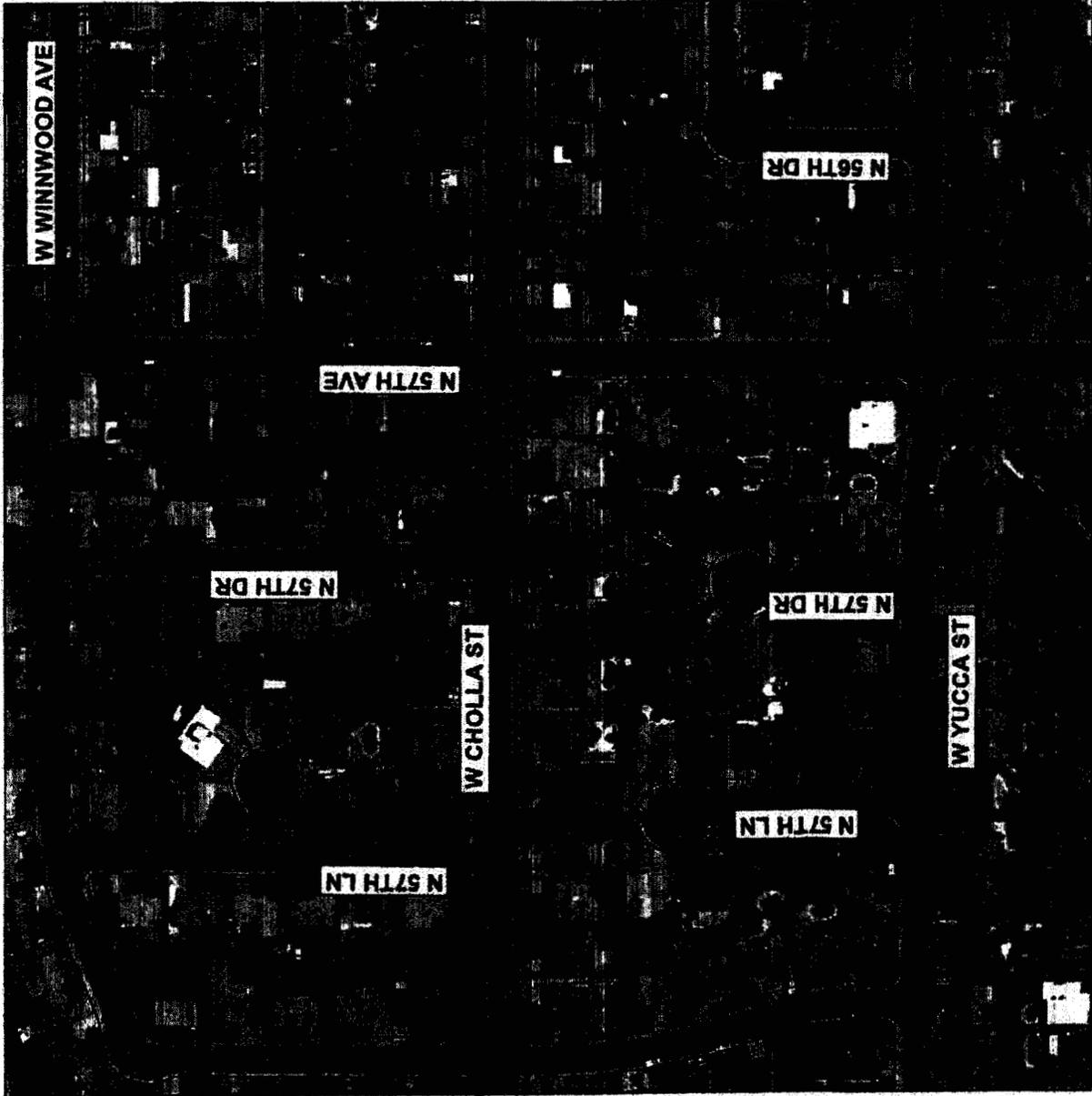


Prepared For:  Prepared By: 

GLENDALE  
Civil Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 22 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
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### Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

### VICINITY MAP



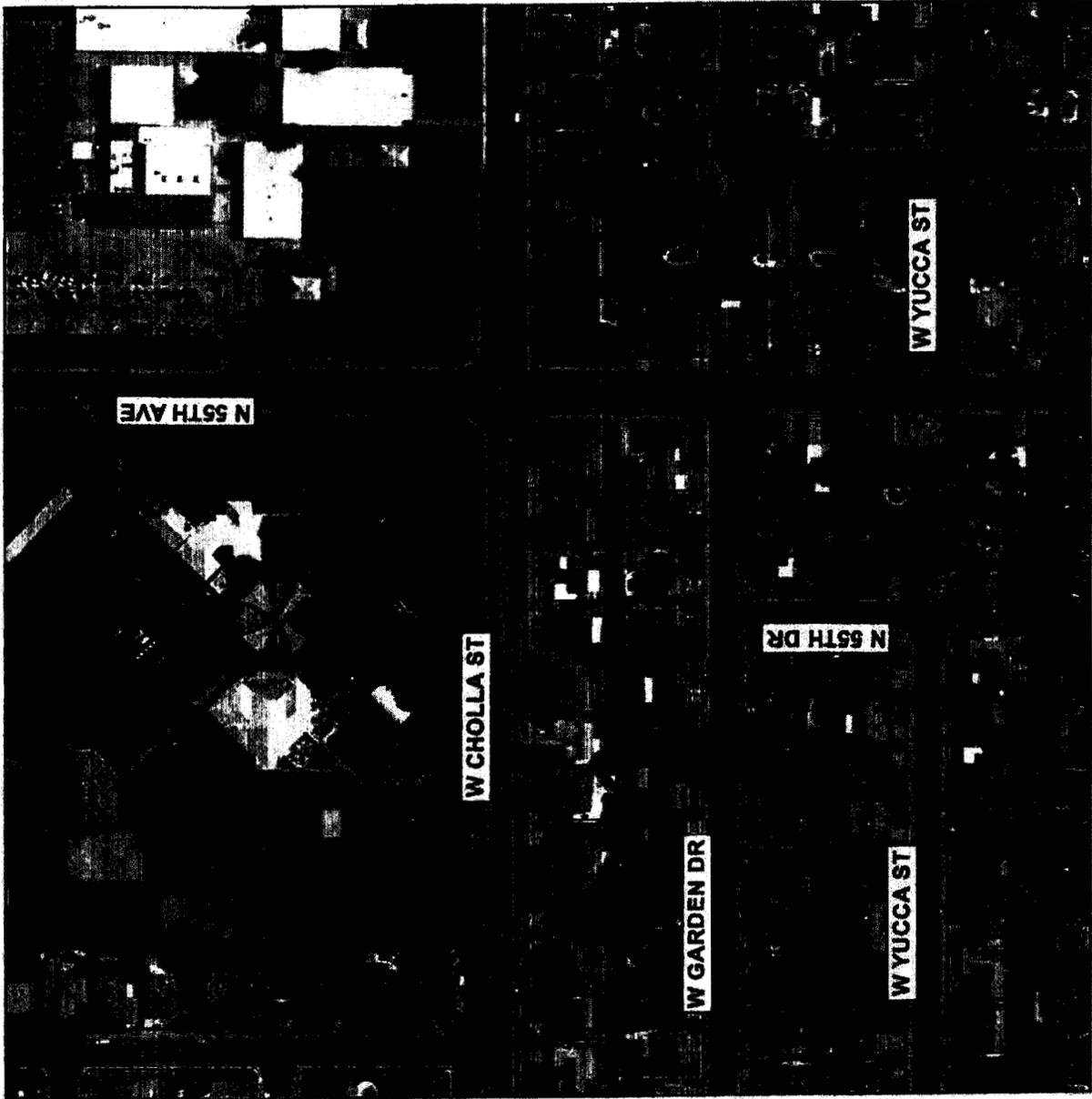
Prepared For:  Prepared By: 



Civil Engineering and Surveying Corporation

# IMPROVEMENT EXHIBIT

EXHIBIT 23 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
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## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



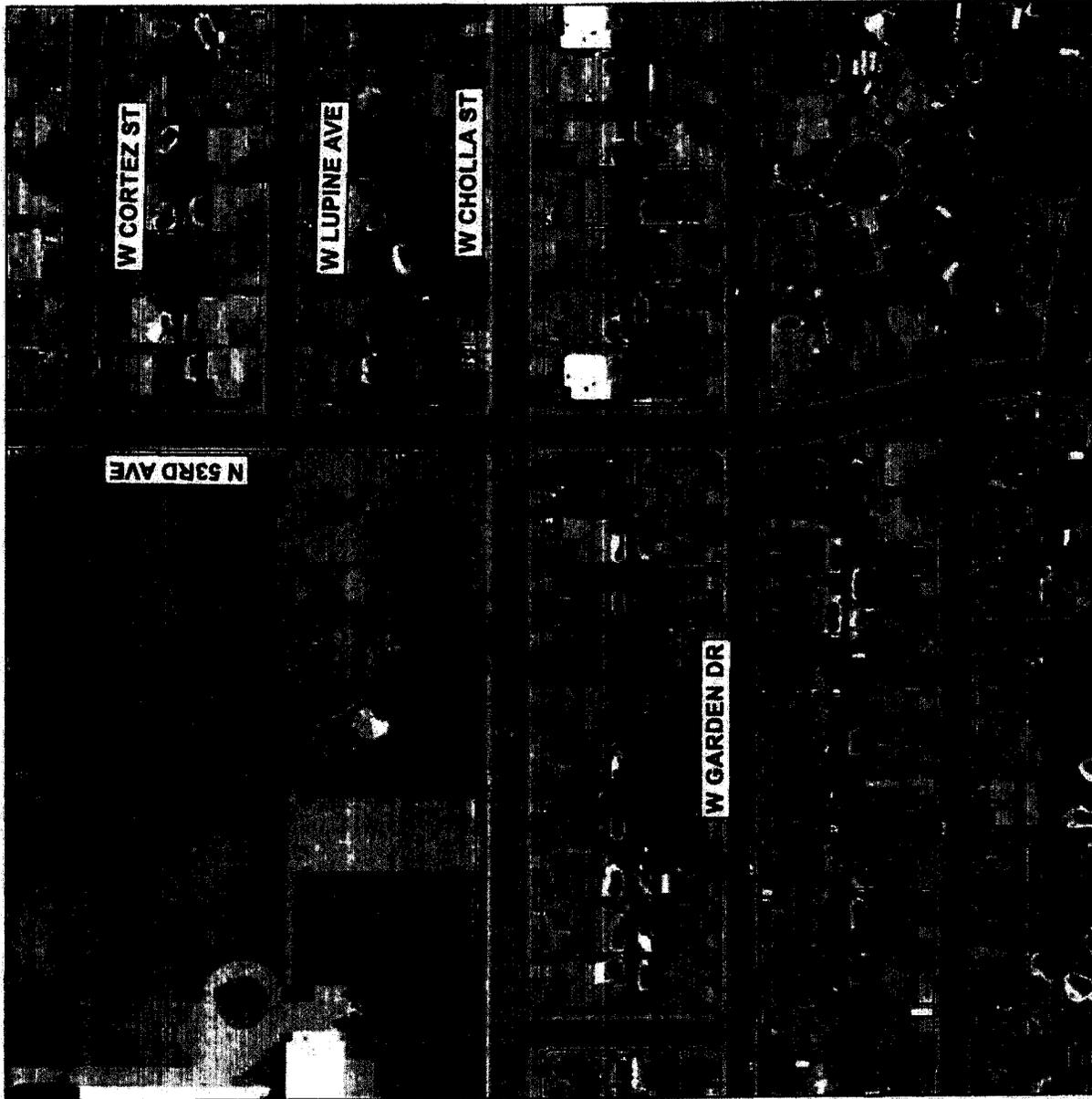
Prepared For:  Prepared By: 



California Professional Engineer License No. 45678

# IMPROVEMENT EXHIBIT

EXHIBIT 24 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
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## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



Prepared For:



**GLENDALE**

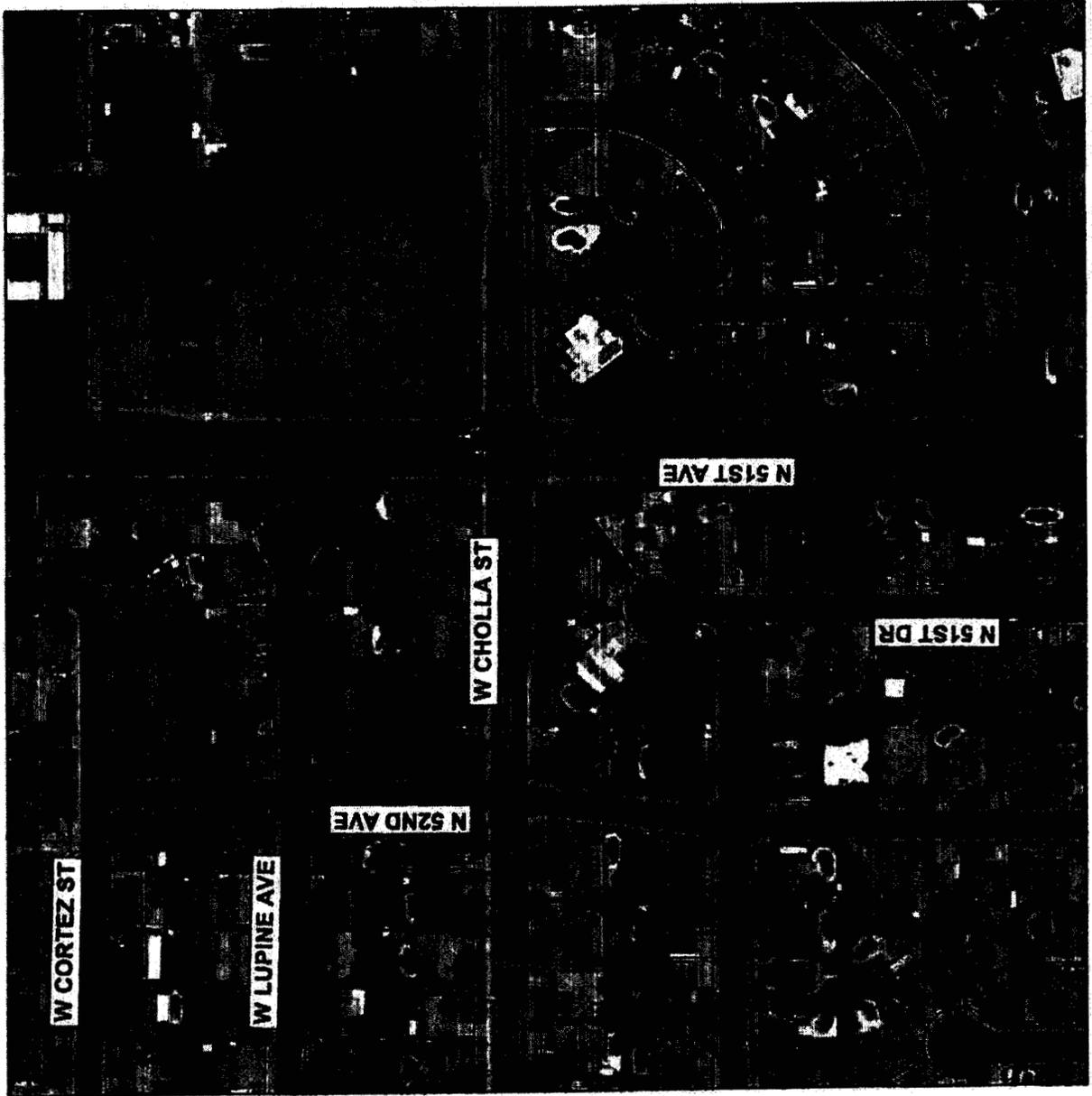
Engineering and Surveying

Prepared By:



# IMPROVEMENT EXHIBIT

EXHIBIT 25 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
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## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



Prepared For:  Prepared By: 

GLENDALE  
Engineering and Surveying Corporation

# IMPROVEMENT EXHIBIT

EXHIBIT 26 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
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## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



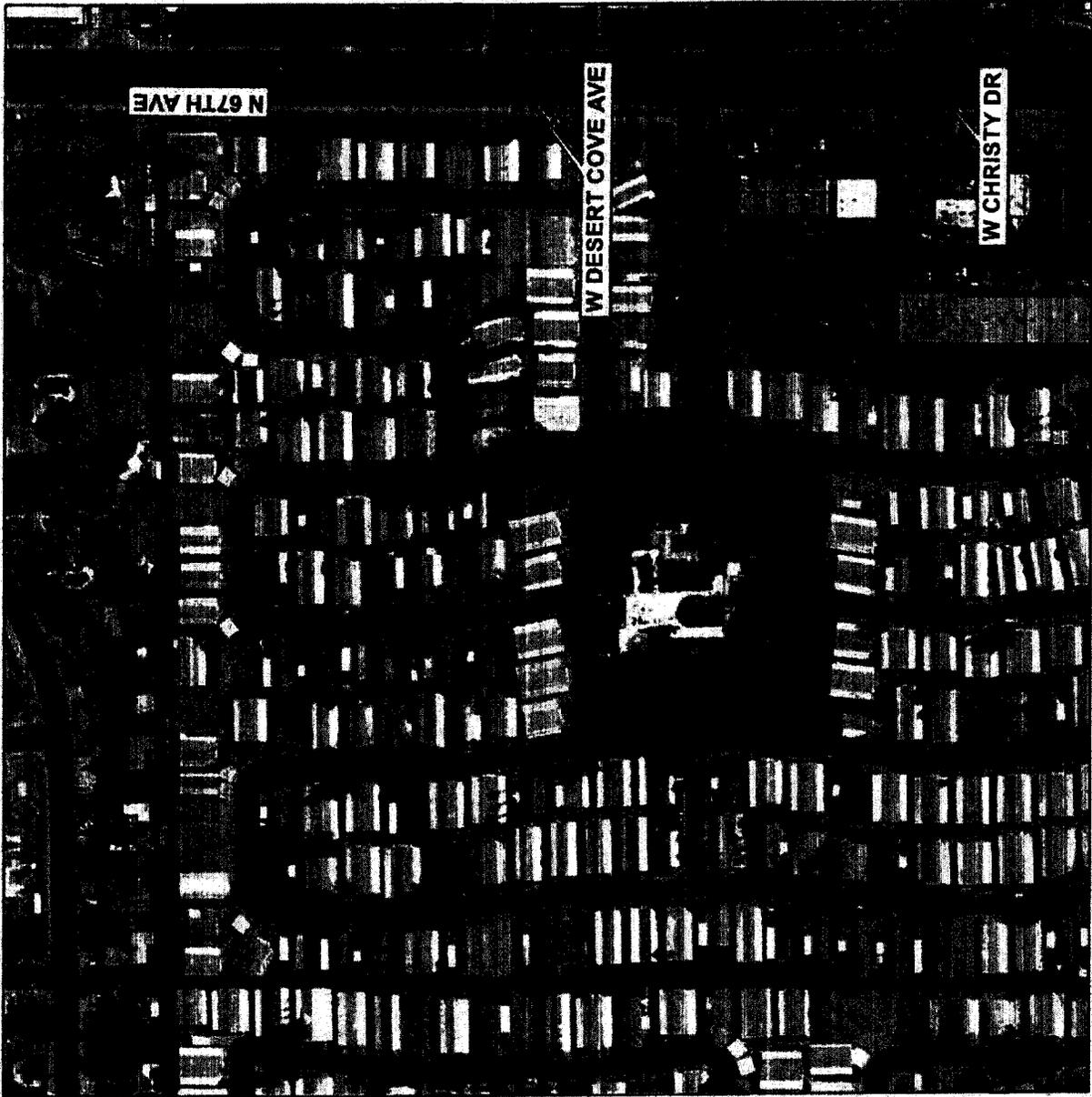
Prepared For: Prepared By:



Civil Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 27 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
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## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



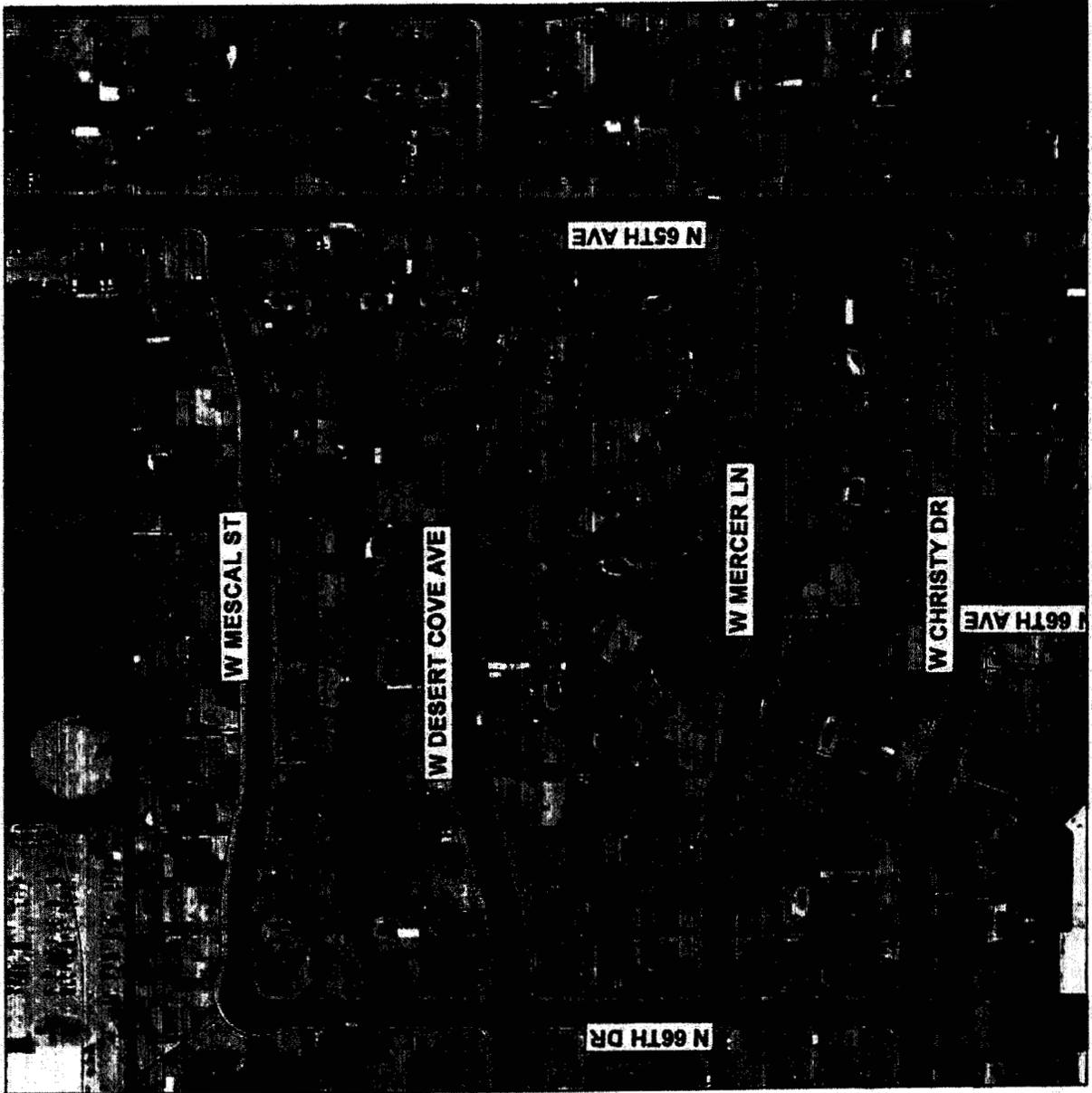
Prepared For: Prepared By:



Civil Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 28 of 56



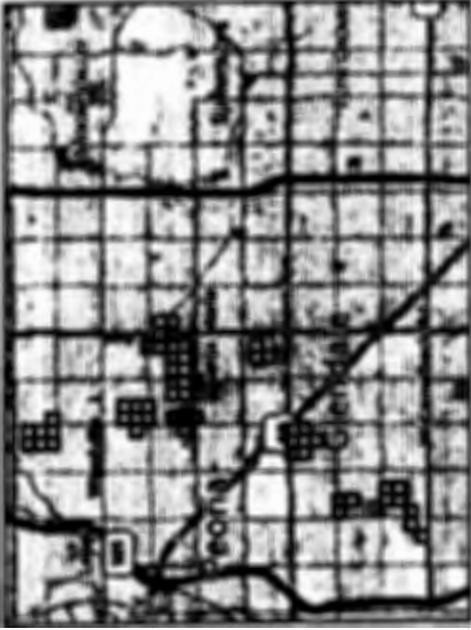
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**Legend**

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



Prepared For: Prepared By:



Civil Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 29 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
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## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



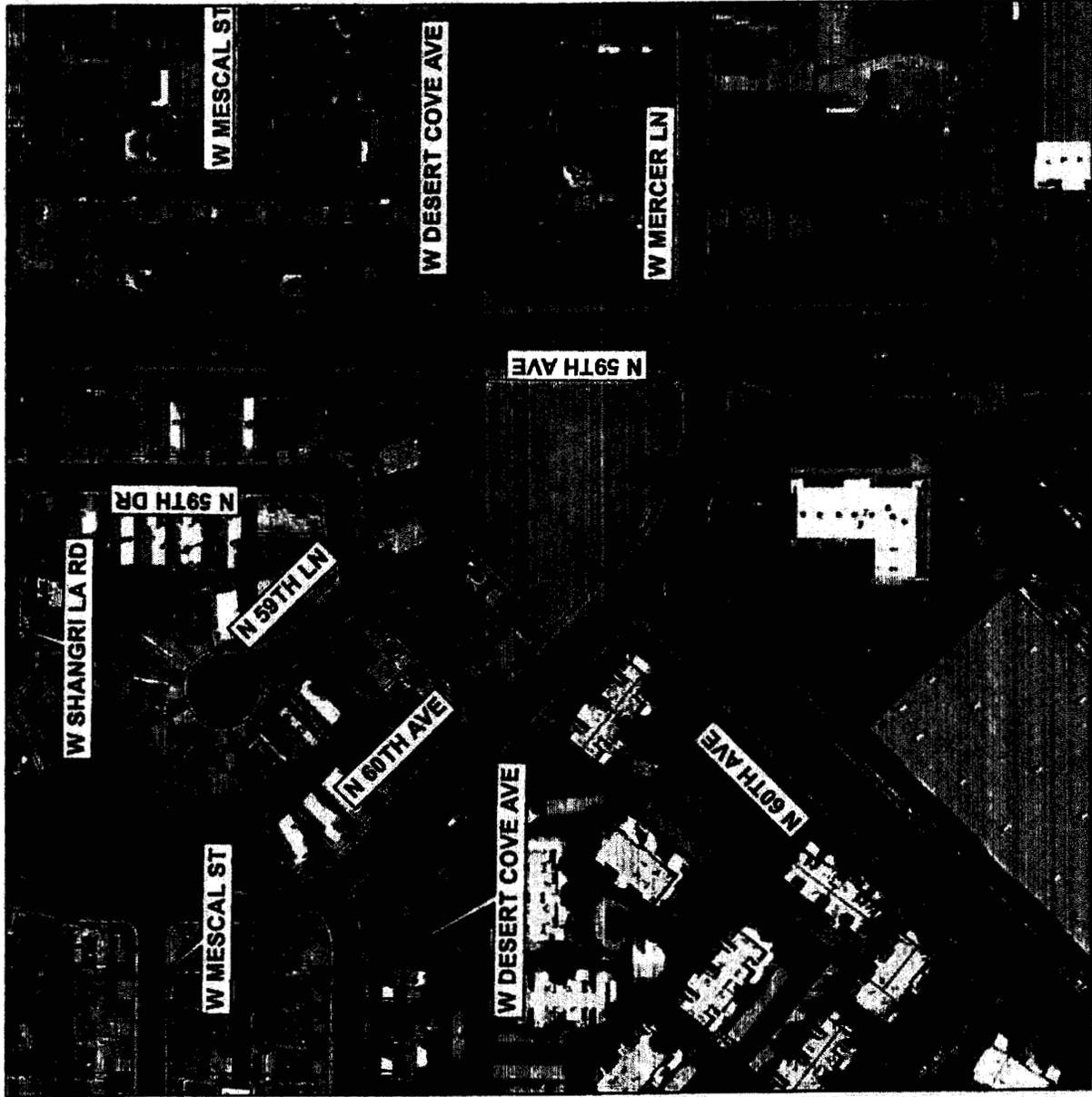
Prepared For: [Redacted] Prepared By: [Redacted]



Call Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 30 of 56



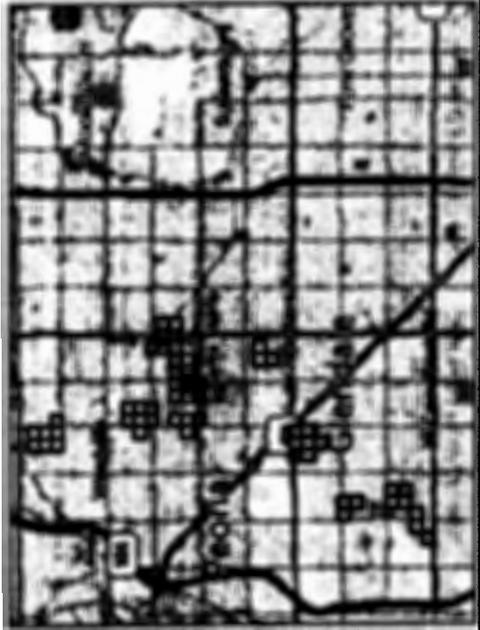
## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
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- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

**Legend**

- Asphalt\_Repair\_Areas
- Crack\_Seal\_Areas
- Single\_Slurry\_Areas
- Double\_Slurry\_Areas

## VICINITY MAP

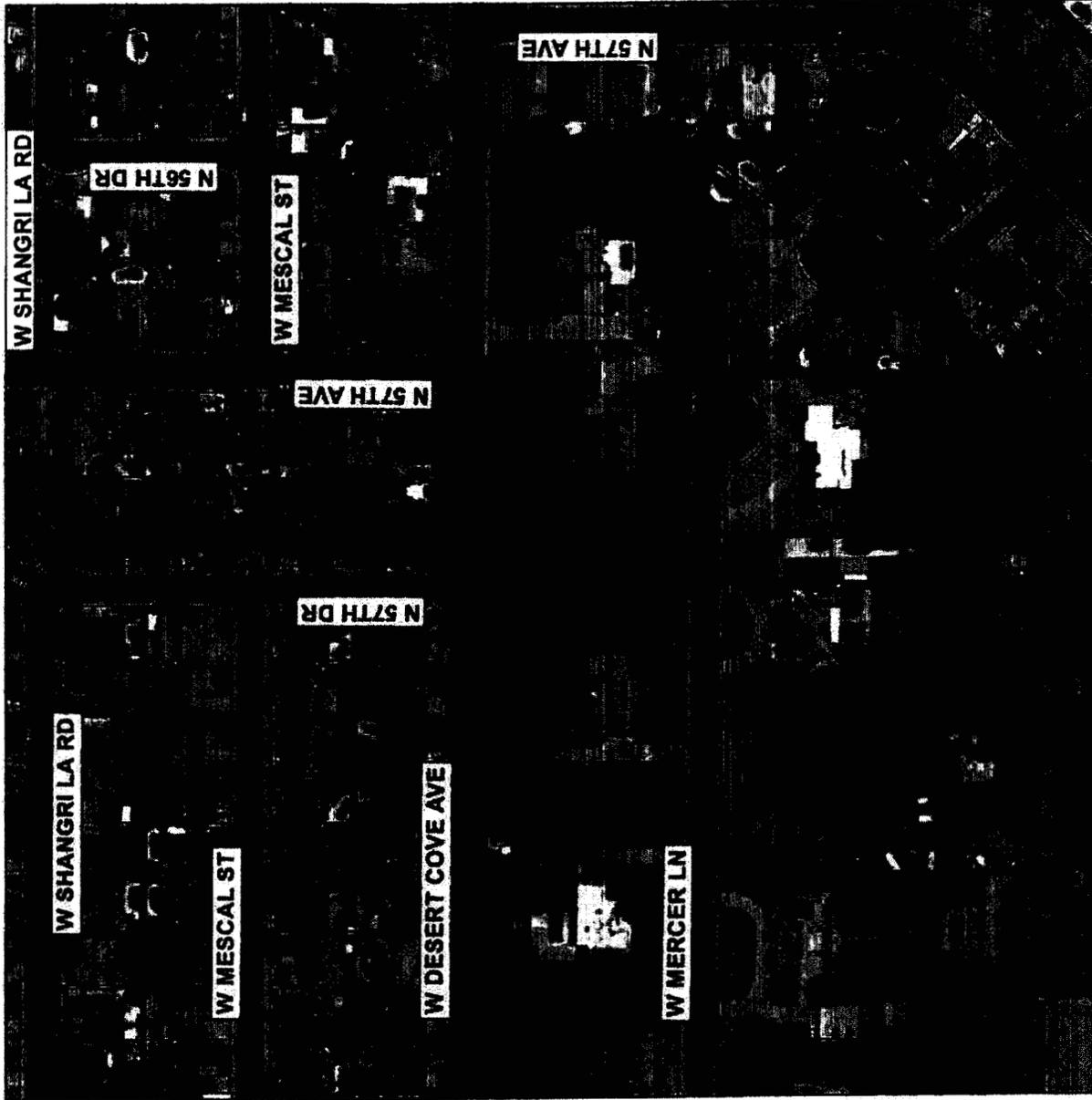


Prepared For:  Prepared By: 

**GLENDALE**  
Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 31 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
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- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

Legend	
■	Asphalt_Repair_Areas
▬	Crack_Seal_Areas
▬	Single_Slurry_Areas
▬	Double_Slurry_Areas

## VICINITY MAP

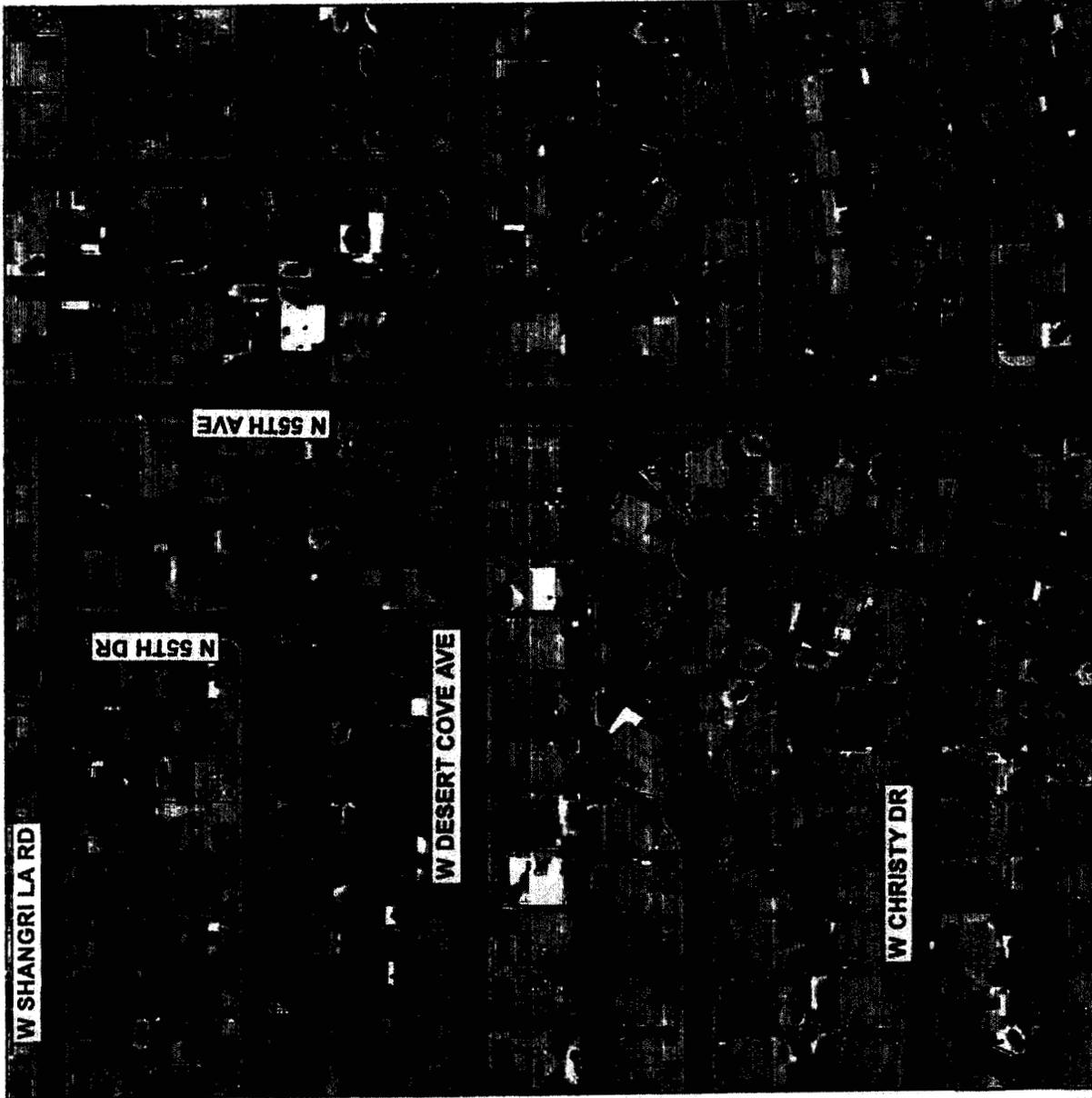


Prepared For:  Prepared By: 

GLENDALE  
Civil Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 32 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
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- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



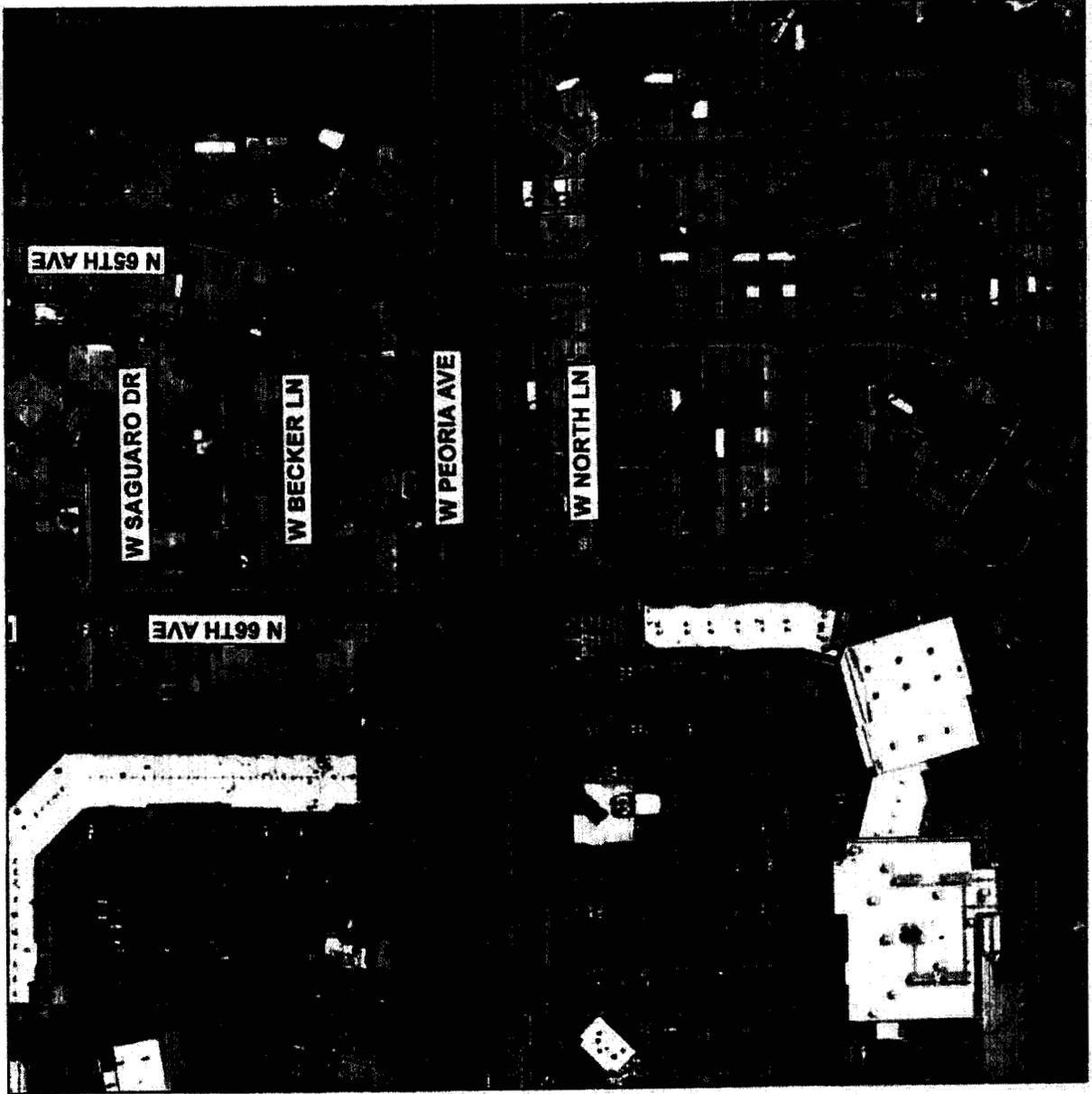
Prepared For: Prepared By:



Civil Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 33 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
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## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



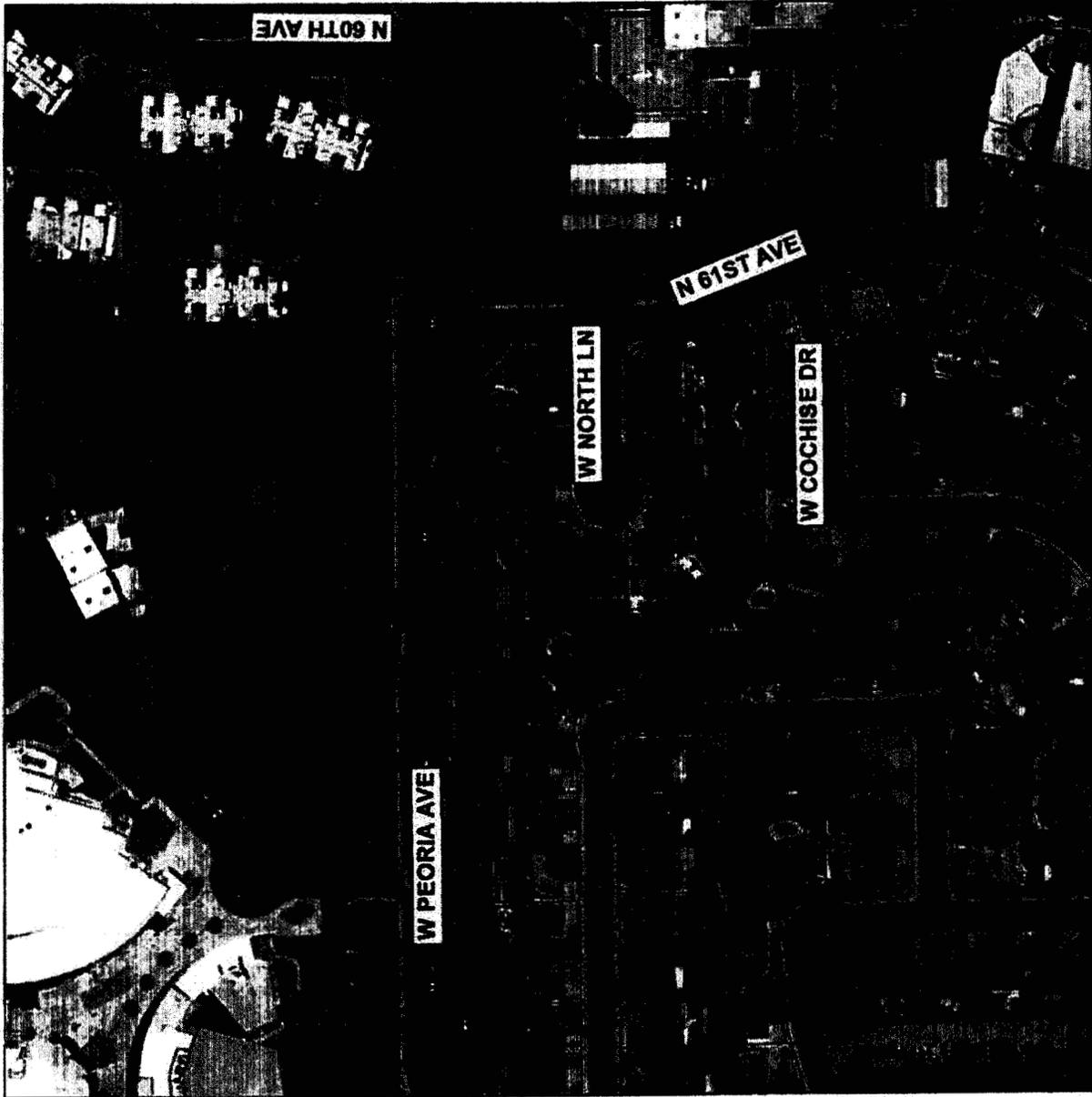
Prepared For: Prepared By:



Civil Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 34 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
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- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

## Legend

- Asphalt\_Repair\_Areas
- Crack\_Seal\_Areas
- Single\_Slurry\_Areas
- Double\_Slurry\_Areas

## VICINITY MAP



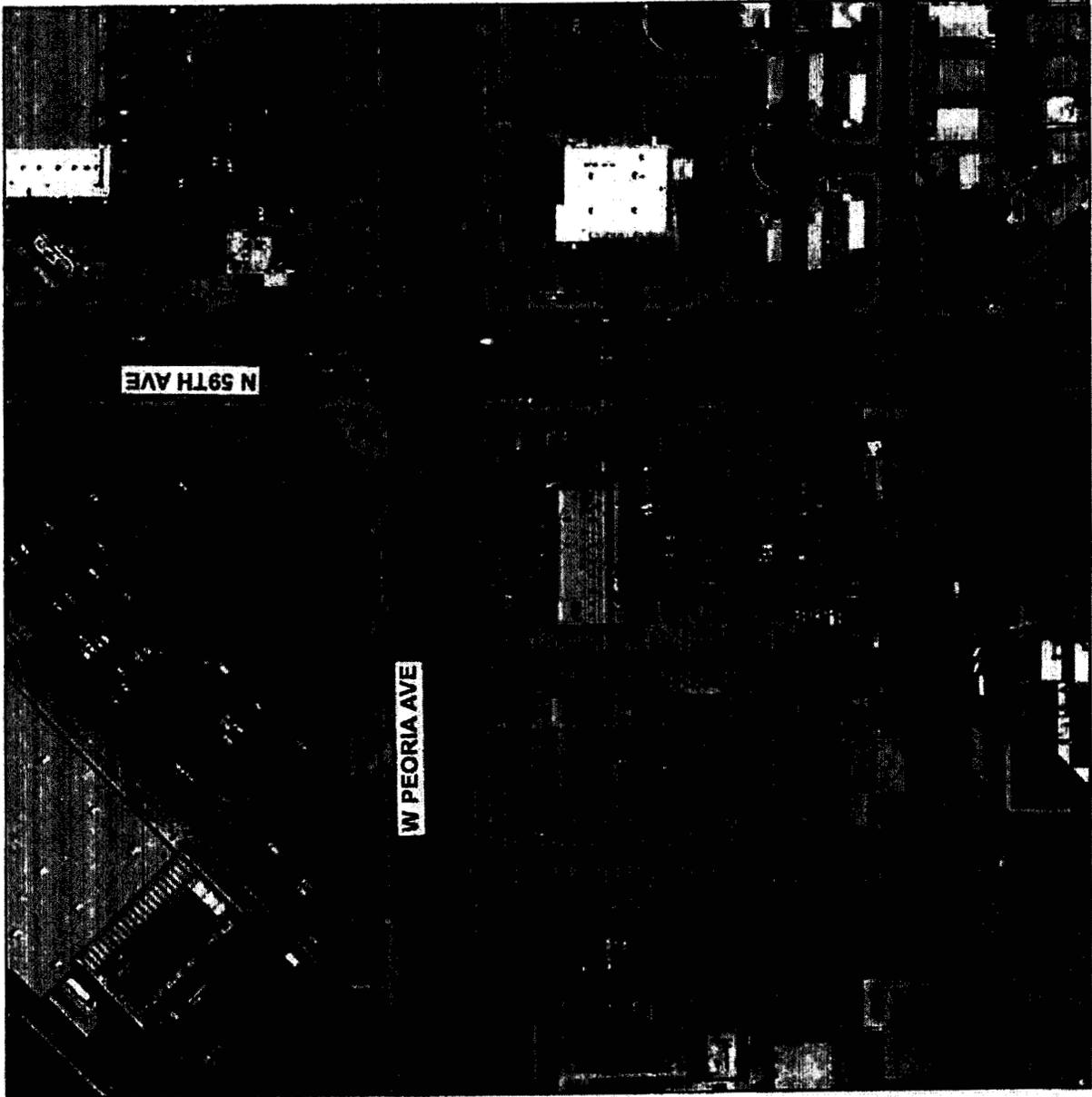
Prepared For: Prepared By:



Civil Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 35 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
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- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



Prepared For:  Prepared By: 

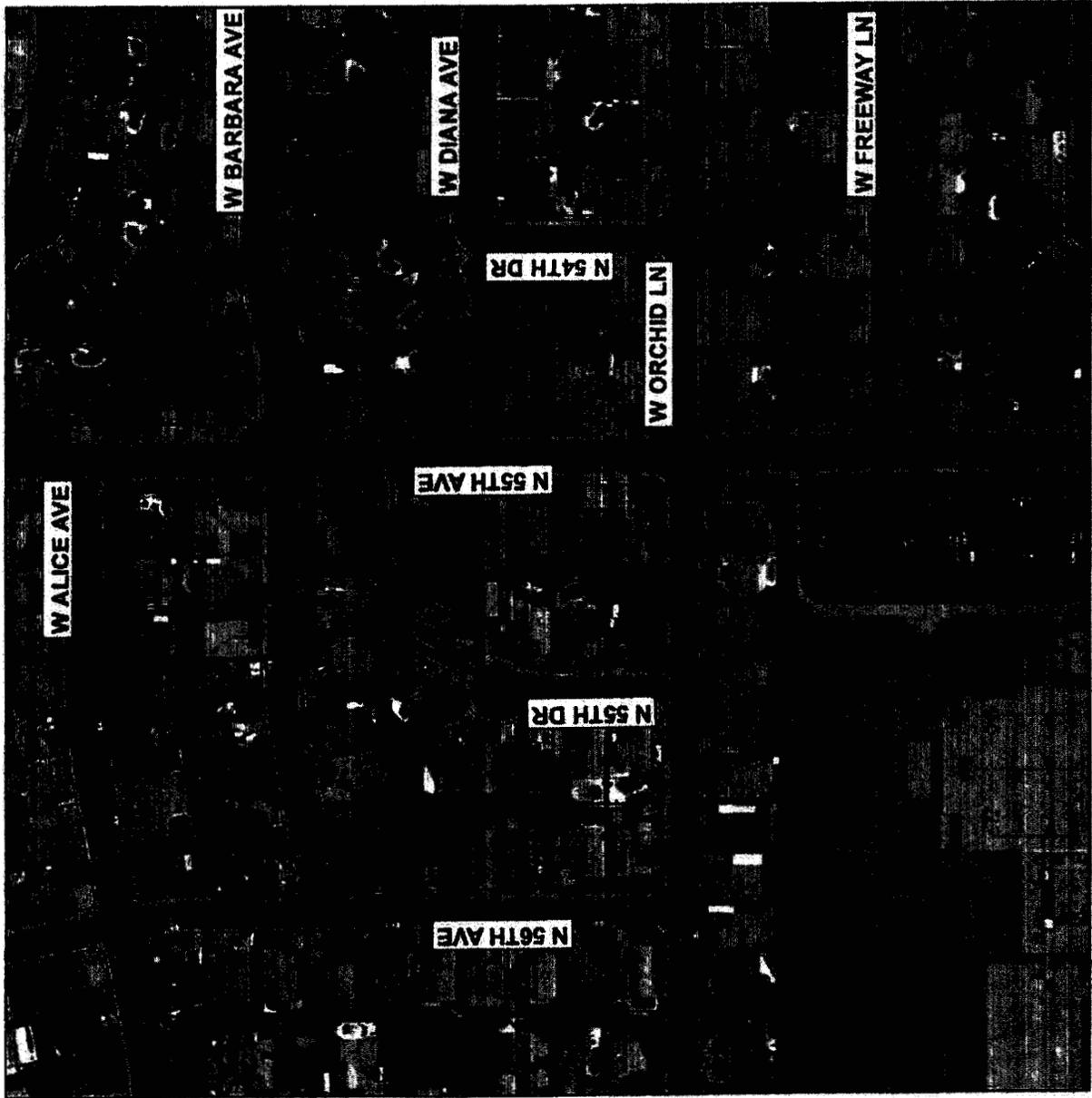


GLENDALE

Civil Engineering and Surveying Professionals

# IMPROVEMENT EXHIBIT

EXHIBIT 36 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
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- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



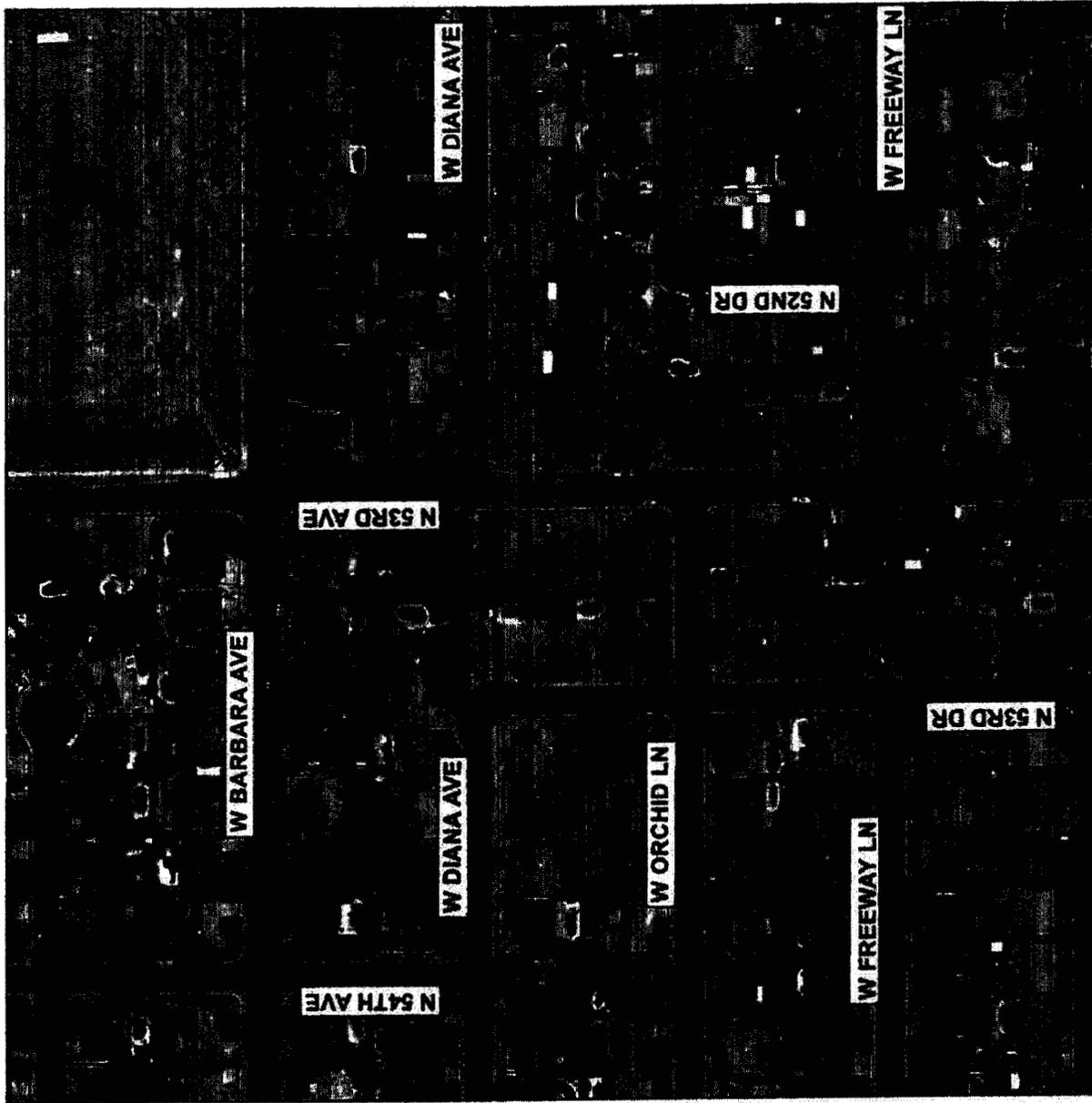
Prepared For:  Prepared By: 

GLENDALE

Civil Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 37 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
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### Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

### VICINITY MAP



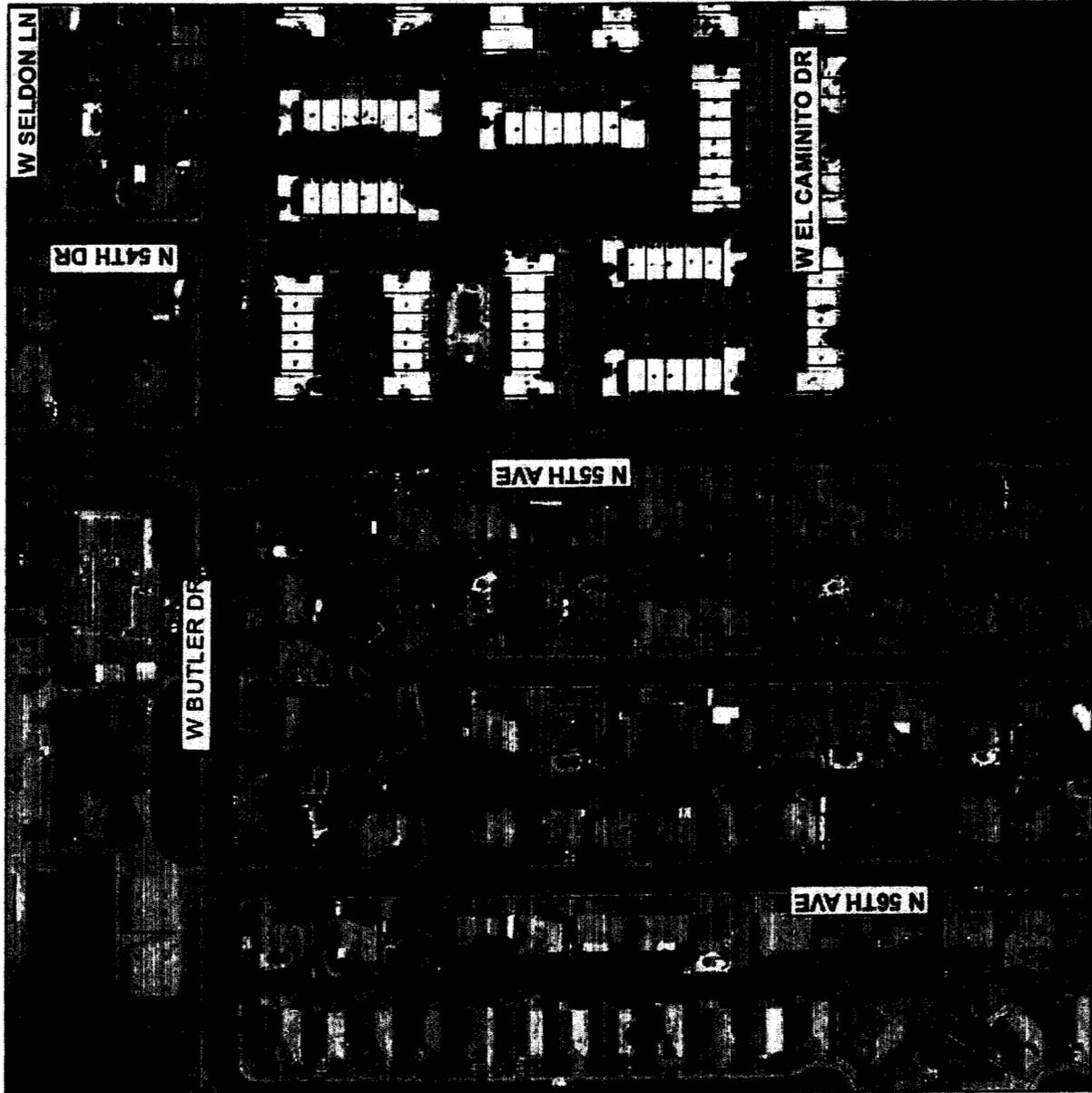
Prepared For:  Prepared By: 



Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 38 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
- 3) ALL STREETS IDENTIFIED TO RECEIVE DOUBLE SLURRY SHALL HAVE A TYPE III SLURRY CAPPED WITH A TYPE II SLURRY APPLIED.
- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

### Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

### VICINITY MAP

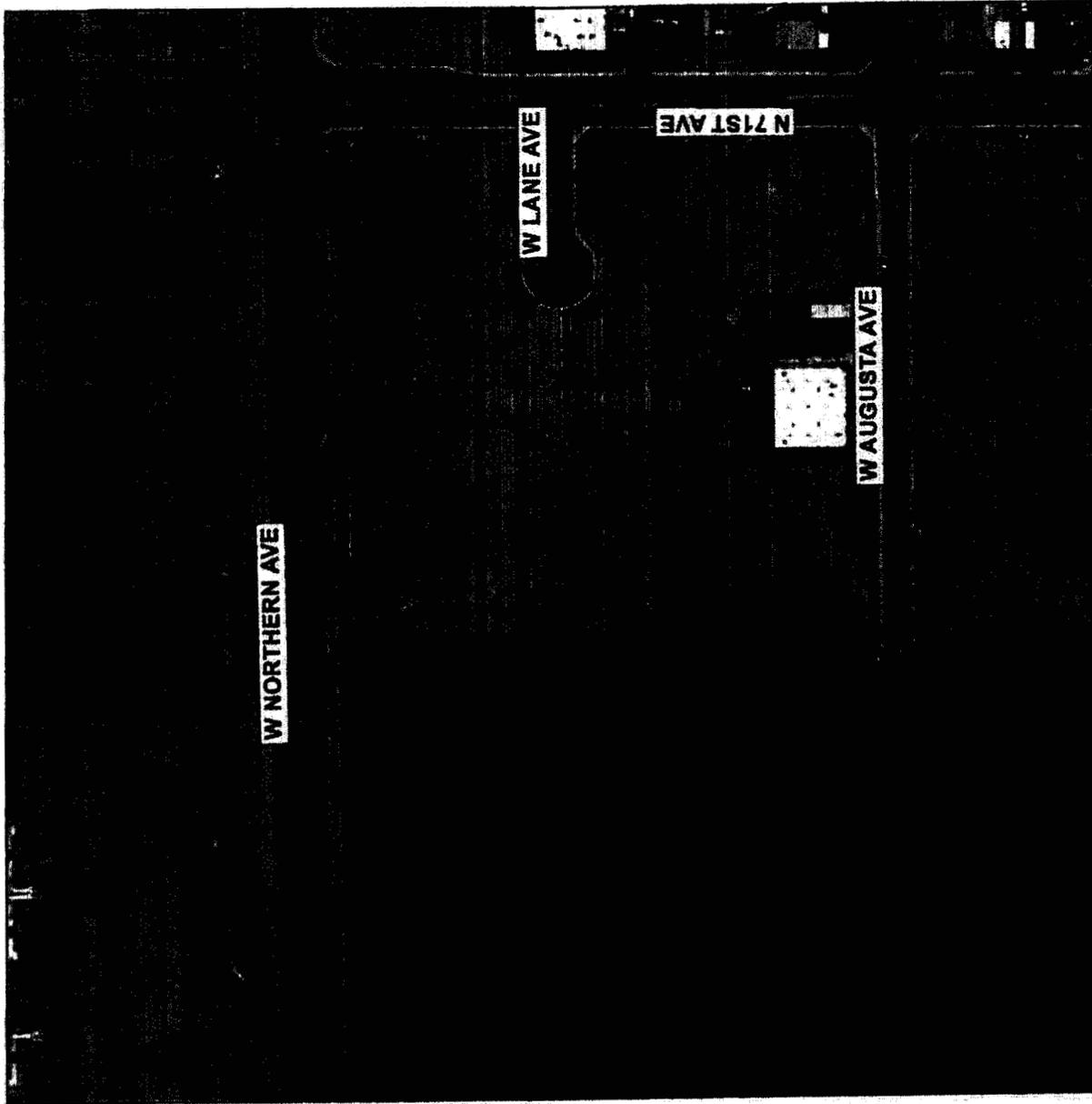


Prepared For:  Prepared By: 

GLENDALE  
Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 39 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
- 3) ALL STREETS IDENTIFIED TO RECEIVE DOUBLE SLURRY SHALL HAVE A TYPE III SLURRY CAPPED WITH A TYPE II SLURRY APPLIED.
- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



Prepared For:



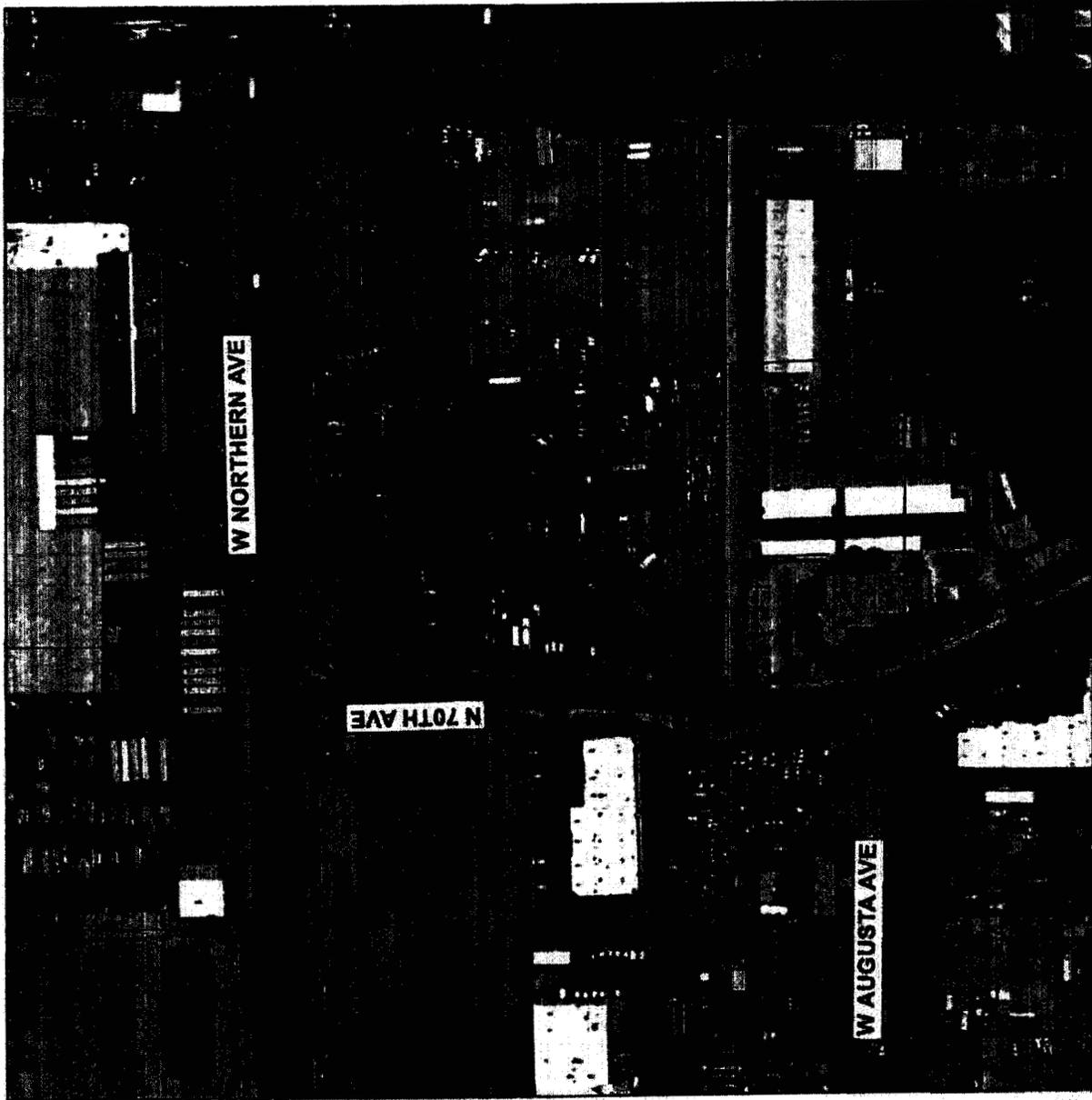
Prepared By:



Civil Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 40 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
- 3) ALL STREETS IDENTIFIED TO RECEIVE DOUBLE SLURRY SHALL HAVE A TYPE III SLURRY CAPPED WITH A TYPE II SLURRY APPLIED.
- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



Prepared For:  Prepared By: 

GLENDALE  
Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 41 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
- 3) ALL STREETS IDENTIFIED TO RECEIVE DOUBLE SLURRY SHALL HAVE A TYPE III SLURRY CAPPED WITH A TYPE II SLURRY APPLIED.
- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



Prepared For:



Prepared By:



Calligraphy and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 42 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
- 3) ALL STREETS IDENTIFIED TO RECEIVE DOUBLE SLURRY SHALL HAVE A TYPE III SLURRY CAPPED WITH A TYPE II SLURRY APPLIED.
- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

### Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

### VICINITY MAP



Prepared For:



GLENDALE

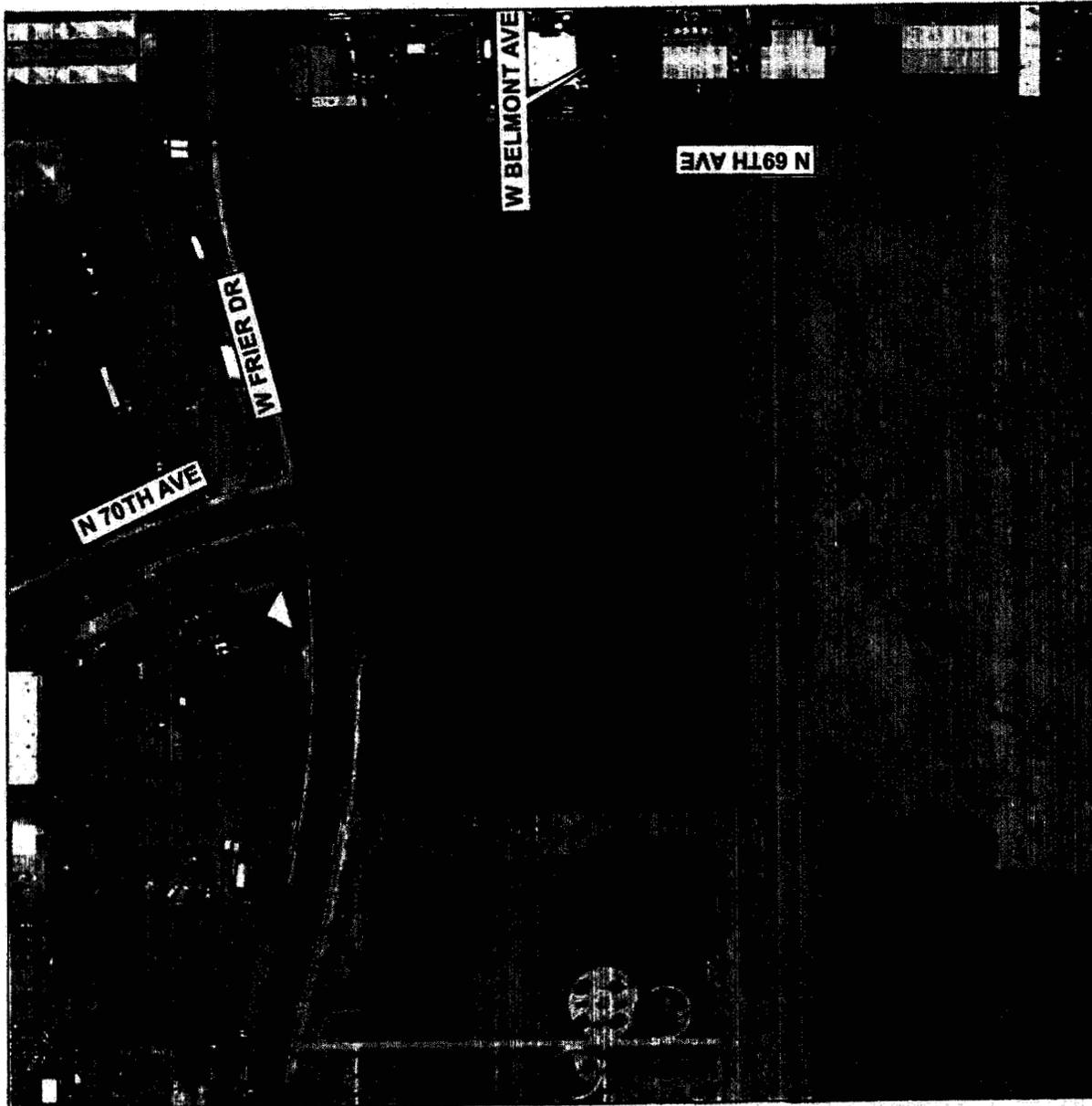
Prepared By:



City Engineering and Surveying Committee

# IMPROVEMENT EXHIBIT

EXHIBIT 43 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
- 3) ALL STREETS IDENTIFIED TO RECEIVE DOUBLE SLURRY SHALL HAVE A TYPE III SLURRY CAPPED WITH A TYPE II SLURRY APPLIED.
- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



Prepared For:



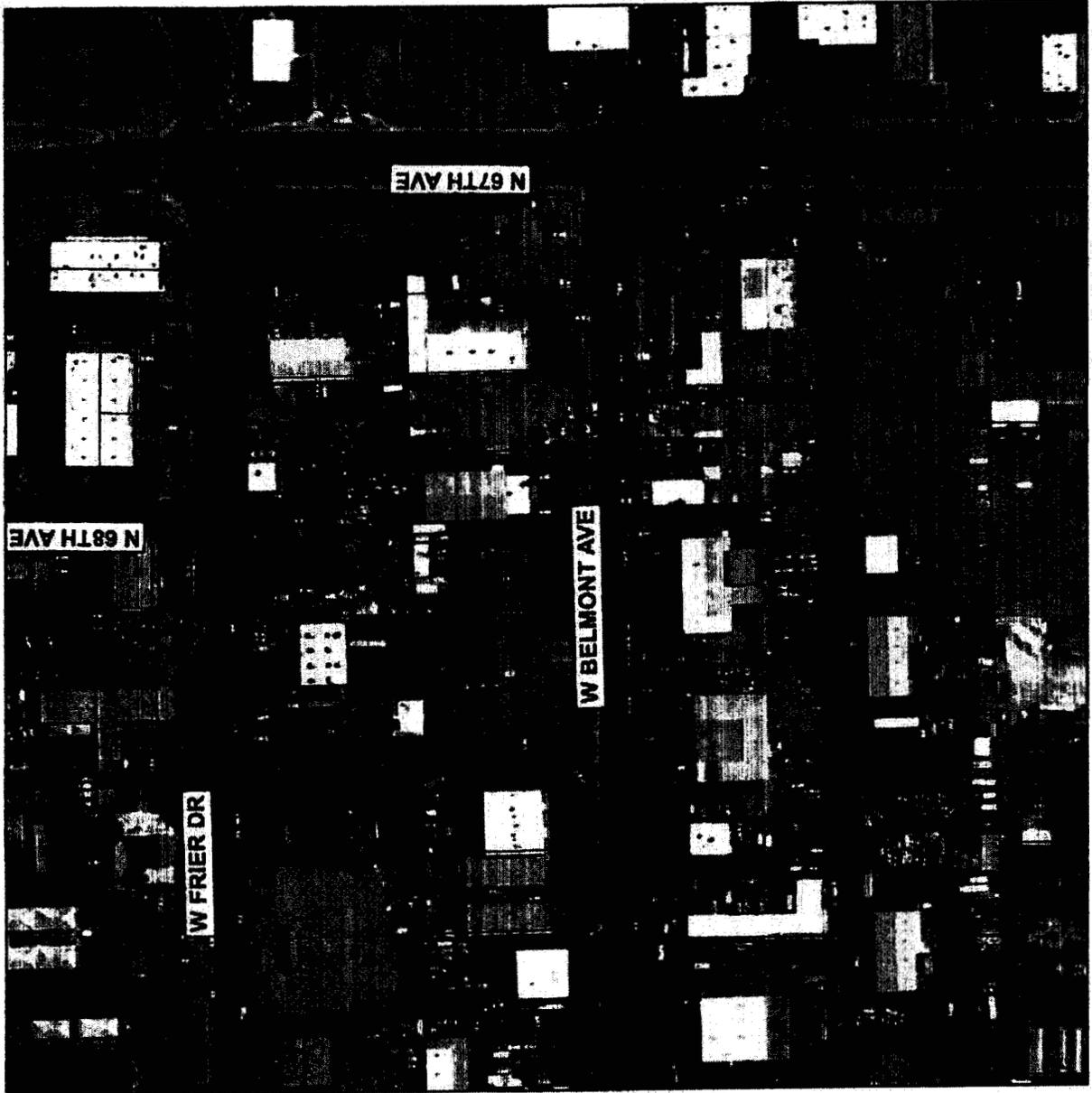
Prepared By:



California Professional Engineer License No. 44808

# IMPROVEMENT EXHIBIT

EXHIBIT 44 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
- 3) ALL STREETS IDENTIFIED TO RECEIVE DOUBLE SLURRY SHALL HAVE A TYPE III SLURRY CAPPED WITH A TYPE II SLURRY APPLIED.
- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



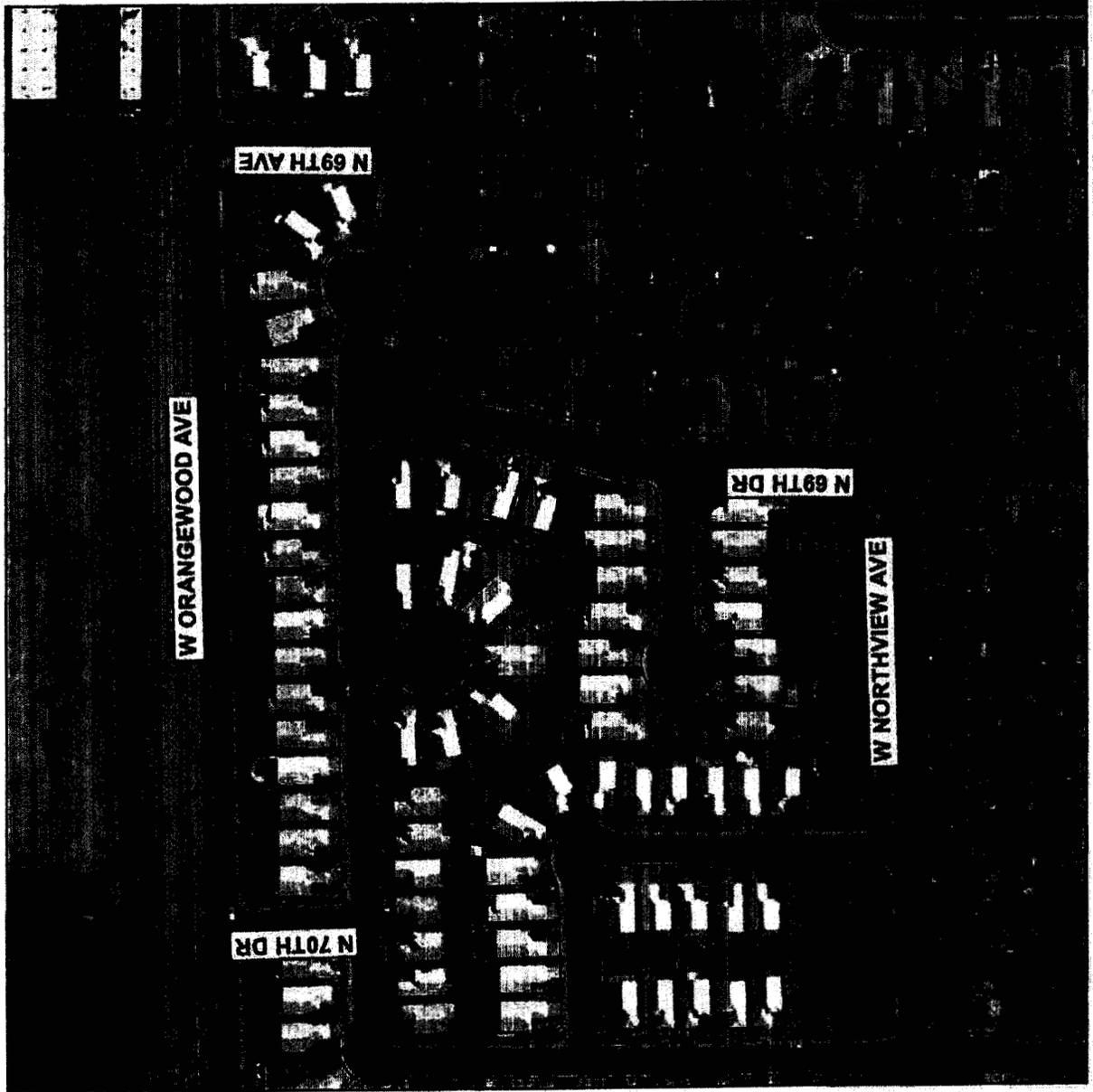
Prepared For: Prepared By:



City of Glendale Engineering and Surveying Department

# IMPROVEMENT EXHIBIT

EXHIBIT 45 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
- 3) ALL STREETS IDENTIFIED TO RECEIVE DOUBLE SLURRY SHALL HAVE A TYPE III SLURRY CAPPED WITH A TYPE II SLURRY APPLIED.
- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

VICINITY MAP



Prepared For:

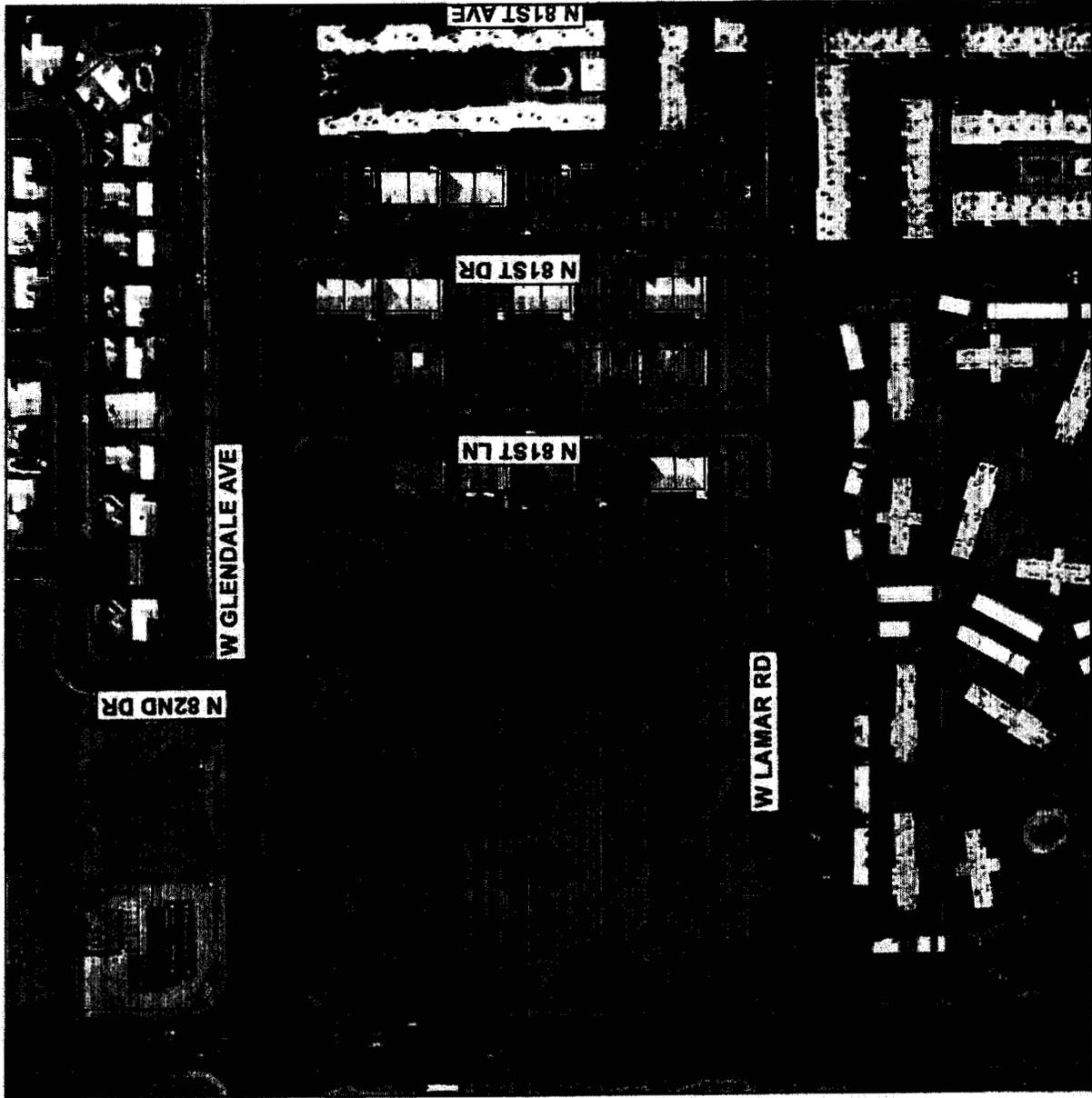


Prepared By:



# IMPROVEMENT EXHIBIT

EXHIBIT 46 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
- 3) ALL STREETS IDENTIFIED TO RECEIVE DOUBLE SLURRY SHALL HAVE A TYPE III SLURRY CAPPED WITH A TYPE II SLURRY APPLIED.
- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



Prepared For: Prepared By:



GLENDALE

Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 47 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
- 3) ALL STREETS IDENTIFIED TO RECEIVE DOUBLE SLURRY SHALL HAVE A TYPE III SLURRY CAPPED WITH A TYPE II SLURRY APPLIED.
- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



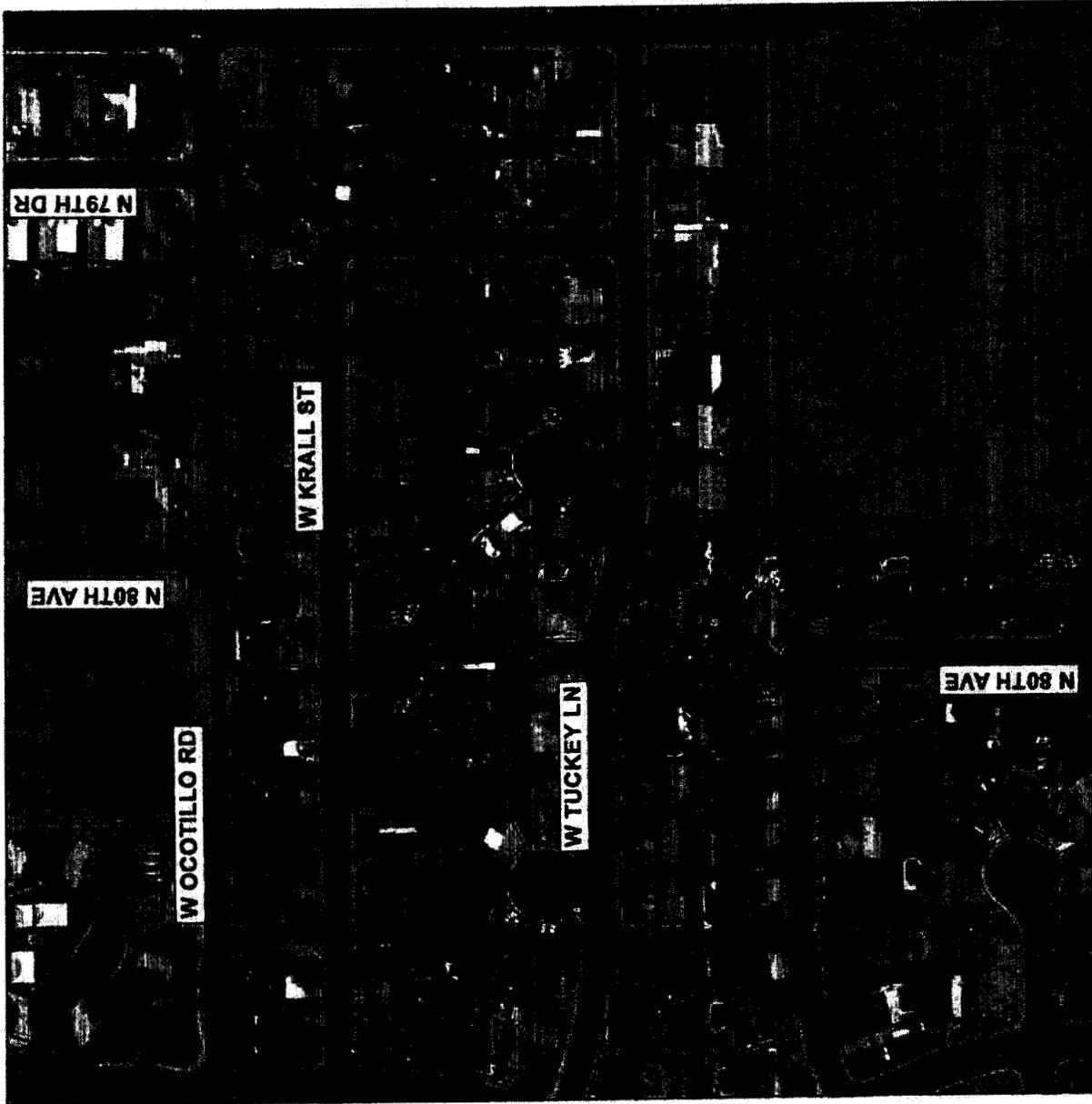
Prepared For: Prepared By:



Civil Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 48 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
- 3) ALL STREETS IDENTIFIED TO RECEIVE DOUBLE SLURRY SHALL HAVE A TYPE III SLURRY CAPPED WITH A TYPE II SLURRY APPLIED.
- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



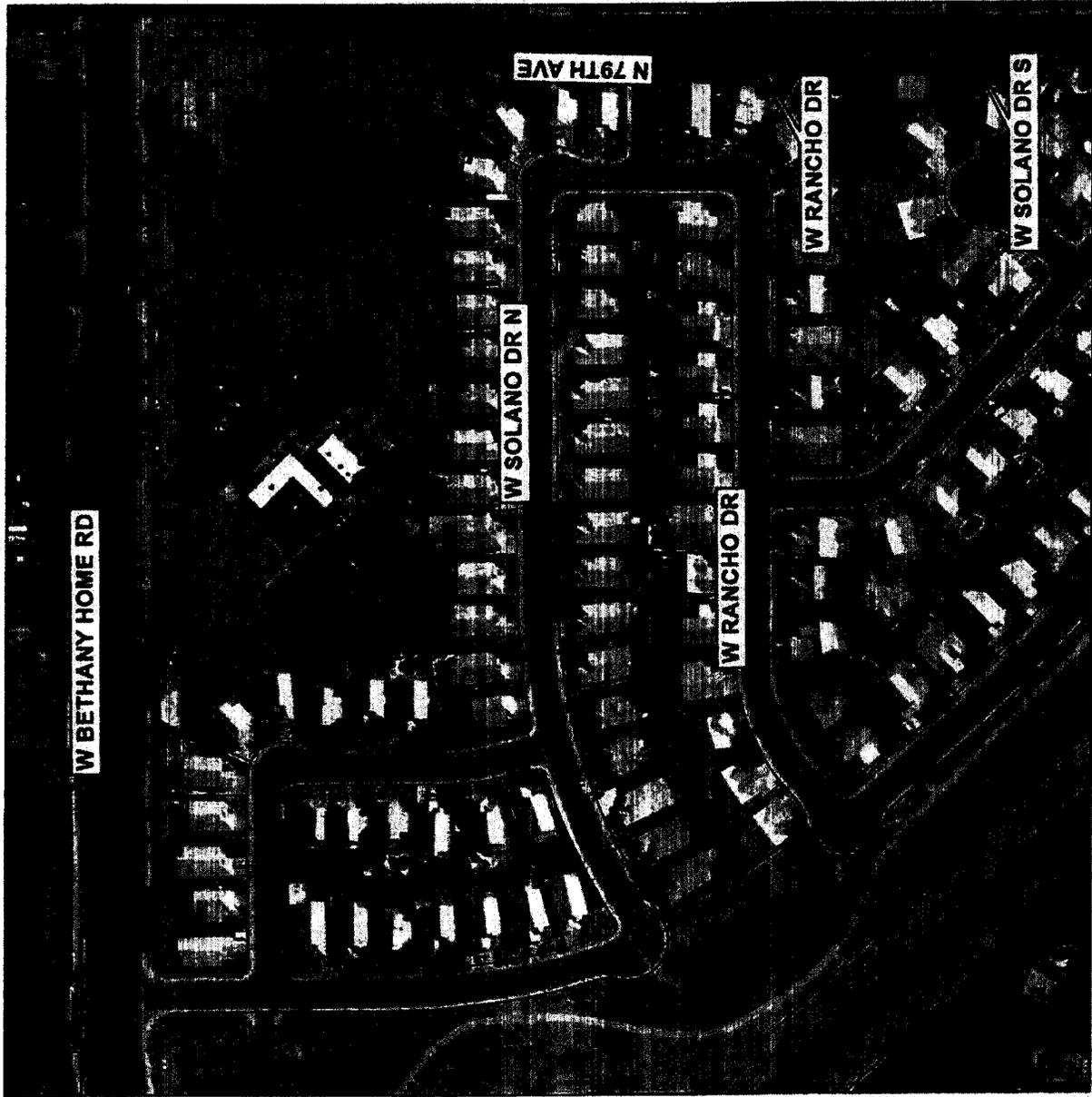
Prepared For:  Prepared By: 



Civil Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 49 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
- 3) ALL STREETS IDENTIFIED TO RECEIVE DOUBLE SLURRY SHALL HAVE A TYPE III SLURRY CAPPED WITH A TYPE II SLURRY APPLIED.
- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

### Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

### VICINITY MAP

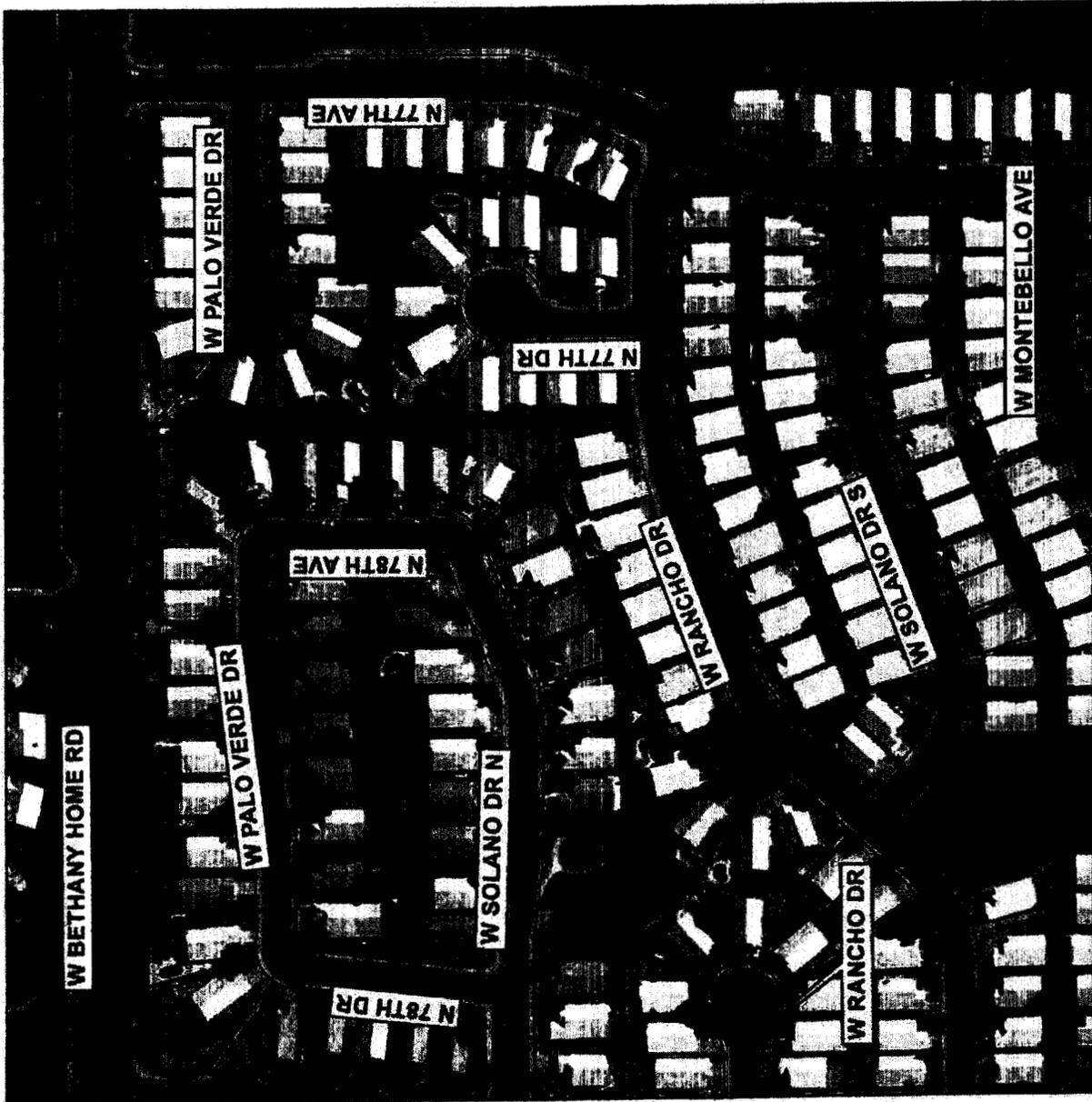


Prepared For:  Prepared By: 

GLENDALE  
Civil Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 50 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
- 3) ALL STREETS IDENTIFIED TO RECEIVE DOUBLE SLURRY SHALL HAVE A TYPE III SLURRY CAPPED WITH A TYPE II SLURRY APPLIED.
- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

## Legend

- Asphalt\_Repair\_Areas
- Crack\_Seal\_Areas
- Single\_Slurry\_Areas
- Double\_Slurry\_Areas

## VICINITY MAP



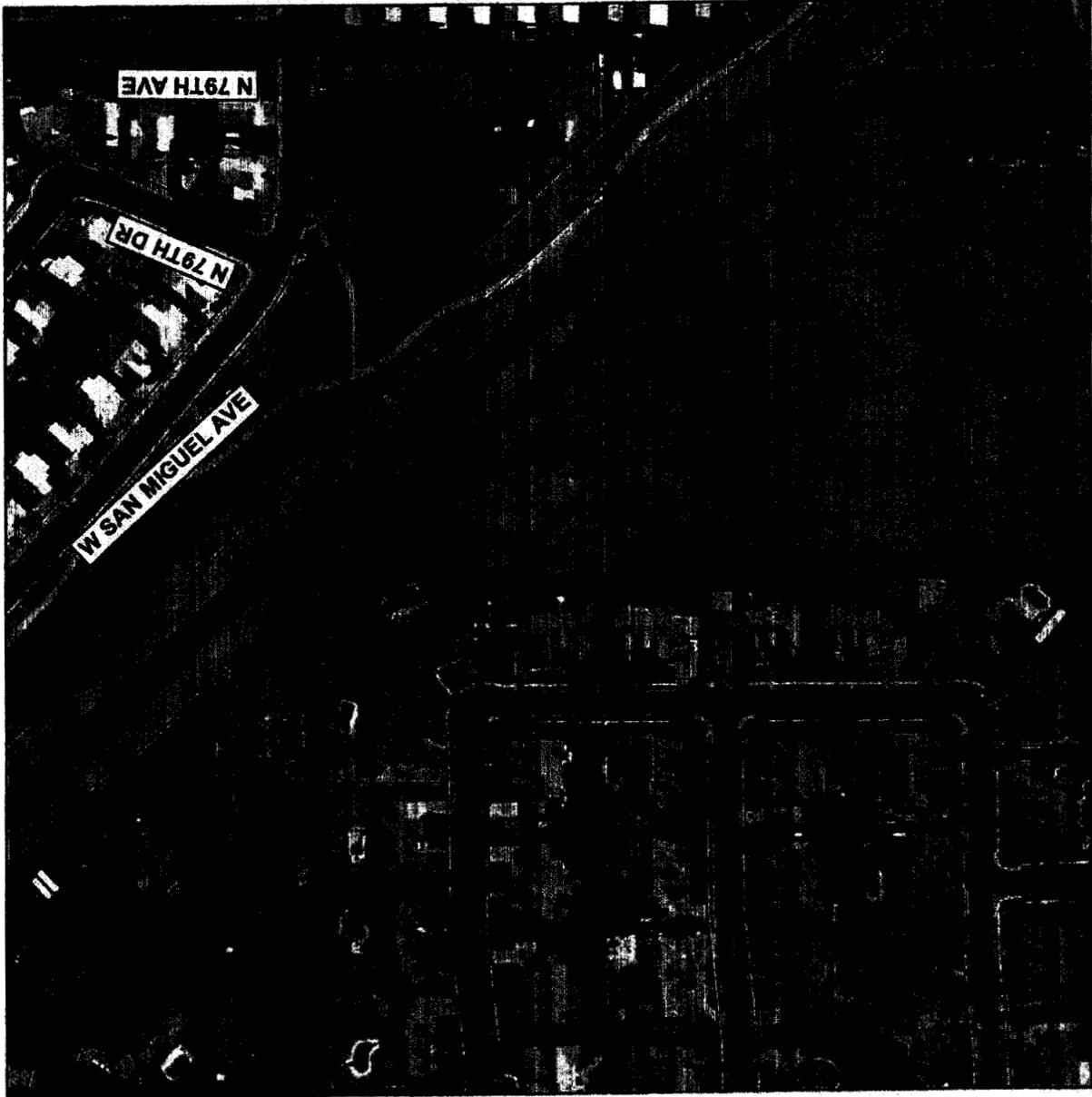
Prepared For: Prepared By:



Civil Engineering and Landscaping Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 51 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
- 3) ALL STREETS IDENTIFIED TO RECEIVE DOUBLE SLURRY SHALL HAVE A TYPE III SLURRY CAPPED WITH A TYPE II SLURRY APPLIED.
- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



Prepared For:



GLENDALE

Prepared By:

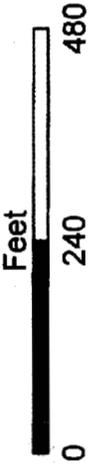
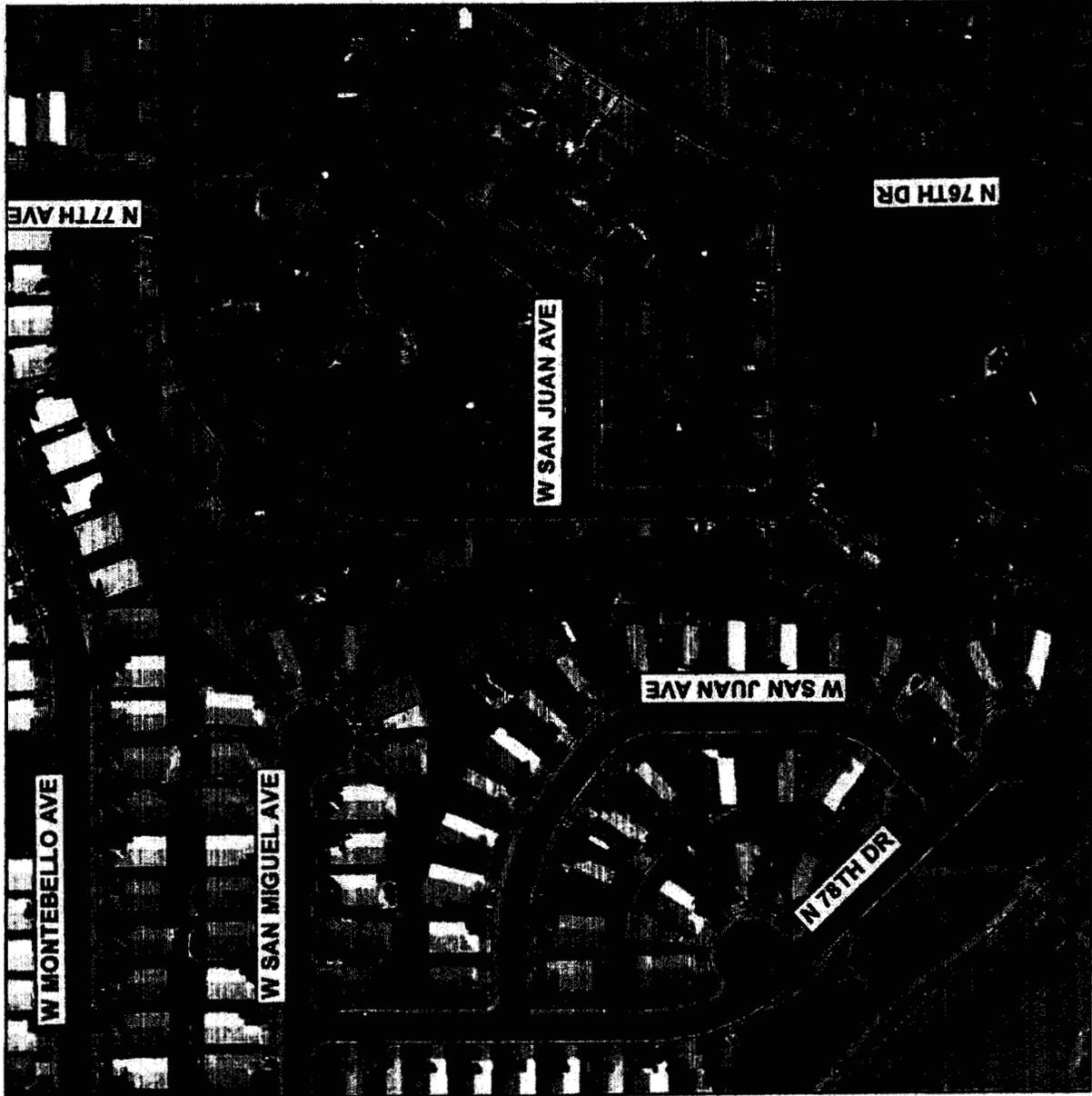


Glendale Engineering and Surveying Consultants



# IMPROVEMENT EXHIBIT

EXHIBIT 52 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
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- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



Prepared For: [Redacted] Prepared By: [Redacted]



Call Engineering and Consulting Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 53 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
- 3) ALL STREETS IDENTIFIED TO RECEIVE DOUBLE SLURRY SHALL HAVE A TYPE III SLURRY CAPPED WITH A TYPE II SLURRY APPLIED.
- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



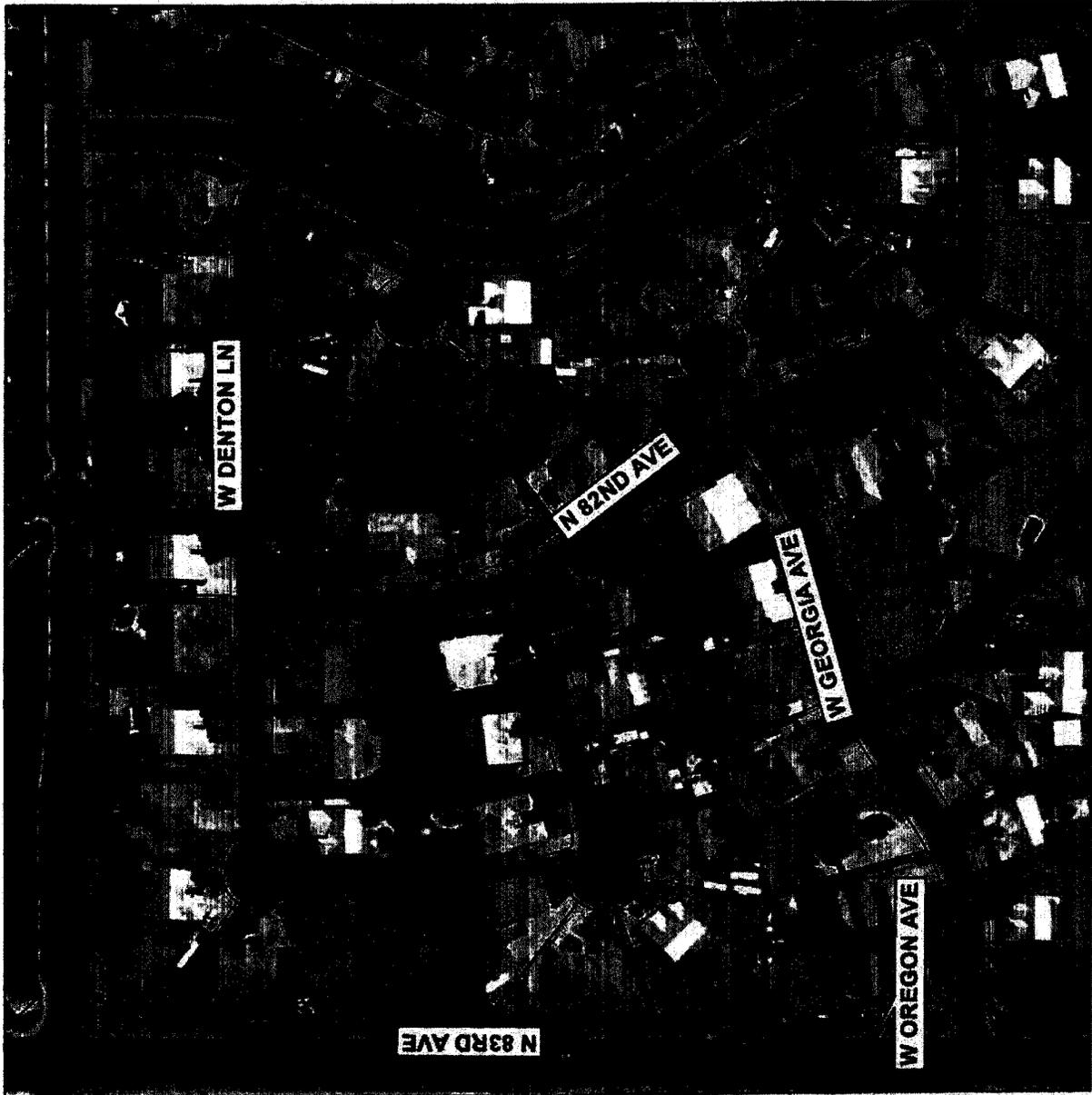
Prepared For:  Prepared By: 

GLENDALE

Civil Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 54 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
- 3) ALL STREETS IDENTIFIED TO RECEIVE DOUBLE SLURRY SHALL HAVE A TYPE III SLURRY CAPPED WITH A TYPE II SLURRY APPLIED.
- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

### Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

### VICINITY MAP

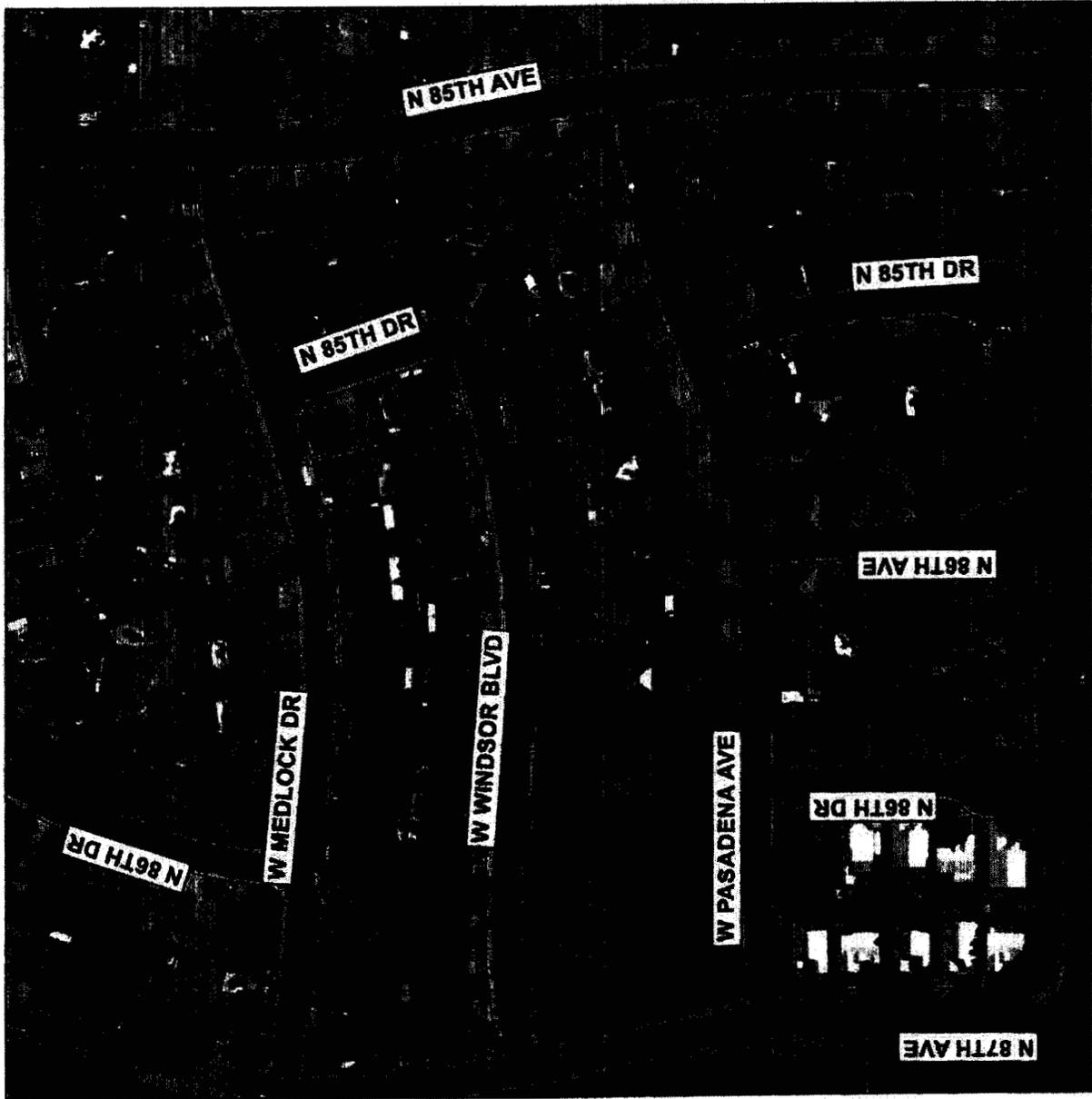


Prepared For:  Prepared By: 

**GLENDALE**  
Civil Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 55 of 56



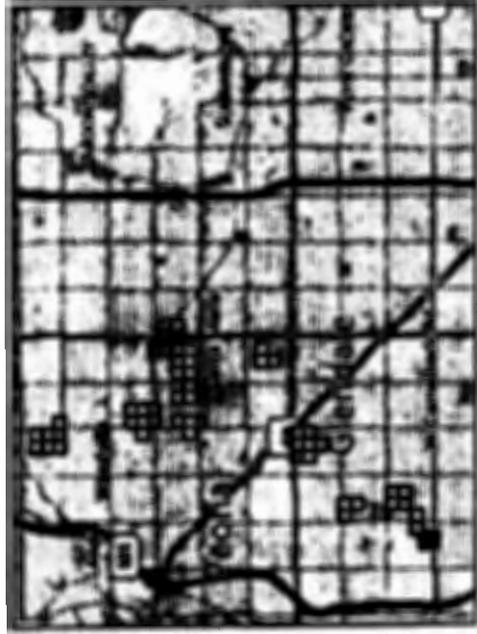
## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
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- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

## Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

## VICINITY MAP



Prepared For: Prepared By:



Civil Engineering and Surveying Consultants

# IMPROVEMENT EXHIBIT

EXHIBIT 56 of 56



## CONSTRUCTION NOTES:

- 1) ALL ASPHALT REPAIR AREA LOCATIONS SHOWN ARE APPROXIMATE. ACTUAL LOCATIONS ARE AS MARKED IN THE FIELD.
- 2) ALL STREETS IDENTIFIED TO RECEIVE SINGLE SLURRY SHALL HAVE A TYPE II SLURRY APPLIED.
- 3) ALL STREETS IDENTIFIED TO RECEIVE DOUBLE SLURRY SHALL HAVE A TYPE III SLURRY CAPPED WITH A TYPE II SLURRY APPLIED.
- 4) SPECIFIC LOCATION INFORMATION AND IMPROVEMENT QUANTITIES CAN BE FOUND IN THE APPLICABLE IMPROVEMENT INDEX.

### Legend

- Asphalt\_Repair\_Areas
- ▬ Crack\_Seal\_Areas
- ▬ Single\_Slurry\_Areas
- ▬ Double\_Slurry\_Areas

### VICINITY MAP



Prepared For:  Prepared By: 

GLENDALE

Civil Engineering and Surveying Consultants

**APPENDIX B**  
**ASPHALT REPAIR INDEX**

**ASPHALT REMOVE/REPAIR AREA INDEX**

Treatment	Rd_Name	Location	Pvmt_Area (S.Y.)	Exhibit No.
ASPHALT_REPAIR	N 50TH AVE	50TH AVE / CHOLLA ST	12	26
ASPHALT_REPAIR	N 50TH AVE	50TH AVE / CHOLLA ST	8	26
ASPHALT_REPAIR	N 51ST DR	11423 N 51ST DR	4	25
ASPHALT_REPAIR	N 52ND AVE	11627 N 52ND AVE	3	17
ASPHALT_REPAIR	N 52ND AVE	11801 N 52ND AVE	7	17
ASPHALT_REPAIR	N 52ND AVE	52ND AVE (LUPINE AVE - CORTEZ ST)	14	25
ASPHALT_REPAIR	N 52ND AVE	52ND AVE (LUPINE AVE - CORTEZ ST)	8	25
ASPHALT_REPAIR	N 52ND AVE	52ND AVE / POINSETTIA DR	6	17
ASPHALT_REPAIR	N 52ND AVE	52ND AVE / POINSETTIA DR	2	17
ASPHALT_REPAIR	N 52ND AVE	52ND AVE / POINSETTIA DR	11	17
ASPHALT_REPAIR	N 52ND AVE	52ND AVE / SUNNYSIDE DR	11	17
ASPHALT_REPAIR	N 52ND AVE	52ND AVE / SUNNYSIDE DR	4	17
ASPHALT_REPAIR	N 53RD AVE	53RD AVE (ALTADENA AVE - SUNNYSIDE DR)	50	16
ASPHALT_REPAIR	N 53RD AVE	53RD AVE (RIVIERA DR - DESERT HILLS DR)	3	16
ASPHALT_REPAIR	N 53RD AVE	53RD AVE (SIERRA ST - ALTADENA AVE)	8	16
ASPHALT_REPAIR	N 53RD AVE	53RD AVE (SIERRA ST - ALTADENA AVE)	6	16
ASPHALT_REPAIR	N 53RD AVE	53RD AVE / CACTUS RD	4	15
ASPHALT_REPAIR	N 53RD AVE	53RD AVE / DESERT HILLS DR	43	15
ASPHALT_REPAIR	N 53RD AVE	53RD AVE / ORCHID LN	9	37
ASPHALT_REPAIR	N 53RD AVE	53RD AVE / POINSETTIA DR	2	16
ASPHALT_REPAIR	N 53RD AVE	53RD AVE / RIVIERA DR	10	16
ASPHALT_REPAIR	N 53RD AVE	53RD AVE / SHAW BUTTE DR	31	15
ASPHALT_REPAIR	N 53RD AVE	53RD AVE / SHAW BUTTE DR	9	15
ASPHALT_REPAIR	N 53RD DR	53RD DR / SELDON LN	8	37
ASPHALT_REPAIR	N 53RD DR	8521 N 53RD DR	5	37
ASPHALT_REPAIR	N 54TH DR	54TH DR / BUTLER DR	8	38
ASPHALT_REPAIR	N 54TH DR	54TH DR / BUTLER DR	5	38
ASPHALT_REPAIR	N 54TH DR	8514 N 54TH DR	5	38
ASPHALT_REPAIR	N 55TH AVE	55TH AVE / FREEWAY LN	16	36
ASPHALT_REPAIR	N 55TH AVE	55TH AVE / FREEWAY LN	10	36
ASPHALT_REPAIR	N 57TH AVE	57TH AVE / CHOLLA ST	18	22
ASPHALT_REPAIR	N 57TH AVE	57TH AVE / DESERT COVE AVE	17	31
ASPHALT_REPAIR	N 57TH AVE	57TH AVE / DESERT COVE AVE	4	32
ASPHALT_REPAIR	N 57TH AVE	57TH AVE / YUCCA ST	13	22
ASPHALT_REPAIR	N 57TH DR	11211 N 57TH DR	11	22
ASPHALT_REPAIR	N 57TH DR	11223 N 57TH DR	4	22
ASPHALT_REPAIR	N 57TH LN	57TH LN / YUCCA ST	12	22

**ASPHALT REMOVE/REPAIR AREA INDEX**

Treatment	Rd_Name	Location	Pvmt_Area (S.Y.)	Exhibit No.
ASPHALT_REPAIR	N 57TH LN	57TH LN / YUCCA ST	10	22
ASPHALT_REPAIR	N 57TH LN	57TH LN / YUCCA ST	4	22
ASPHALT_REPAIR	N 59TH DR	59TH DR / SHANGRILA RD	5	21
ASPHALT_REPAIR	N 59TH DR	59TH DR / SHANGRILA RD	3	30
ASPHALT_REPAIR	N 59TH DR	59TH DR / YUCCA ST	10	21
ASPHALT_REPAIR	N 60TH AVE	11009 N 60TH AVE	7	30
ASPHALT_REPAIR	N 60TH AVE	11210 N 60TH AVE	5	30
ASPHALT_REPAIR	N 60TH AVE	60TH AVE (61ST AVE - MERCER LN)	7	30
ASPHALT_REPAIR	N 60TH AVE	60TH AVE (61ST AVE - MERCER LN)	7	30
ASPHALT_REPAIR	N 60TH AVE	60TH AVE (61ST AVE - MERCER LN)	3	30
ASPHALT_REPAIR	N 60TH AVE	60TH AVE (MESCAL ST - 11112 N 60TH AVE)	7	30
ASPHALT_REPAIR	N 60TH AVE	60TH AVE (MESCAL ST - 11112 N 60TH AVE)	10	30
ASPHALT_REPAIR	N 60TH AVE	60TH AVE (PEORIA AVE - 61ST AVE)	6	34
ASPHALT_REPAIR	N 60TH AVE	60TH AVE (PEORIA AVE - 61ST AVE)	2	34
ASPHALT_REPAIR	N 60TH AVE	60TH AVE (PEORIA AVE - 61ST AVE)	2	34
ASPHALT_REPAIR	N 60TH AVE	60TH AVE (PEORIA AVE - 61ST AVE)	4	34
ASPHALT_REPAIR	N 60TH AVE	60TH AVE (PEORIA AVE - 61ST AVE)	4	30
ASPHALT_REPAIR	N 60TH AVE	60TH AVE / DESERT COVE AVE	2	30
ASPHALT_REPAIR	N 60TH AVE	60TH AVE / DESERT COVE AVE	5	30
ASPHALT_REPAIR	N 60TH AVE	60TH AVE / DESERT COVE AVE	4	30
ASPHALT_REPAIR	N 60TH AVE	60TH AVE / DESERT COVE AVE	4	30
ASPHALT_REPAIR	N 60TH AVE	60TH AVE / GARDEN DR	5	21
ASPHALT_REPAIR	N 60TH AVE	60TH AVE / GARDEN DR	8	21
ASPHALT_REPAIR	N 60TH AVE	60TH AVE / MERCER LN	15	30
ASPHALT_REPAIR	N 60TH AVE	60TH AVE / MERCER LN	14	30
ASPHALT_REPAIR	N 60TH AVE	60TH AVE / MERCER LN	2	30
ASPHALT_REPAIR	N 60TH AVE	60TH AVE / MERCER LN	24	30
ASPHALT_REPAIR	N 60TH AVE	60TH AVE / MERCER LN	12	30
ASPHALT_REPAIR	N 60TH AVE	60TH AVE / MERCER LN	5	30
ASPHALT_REPAIR	N 60TH AVE	60TH AVE / MERCER LN	3	30
ASPHALT_REPAIR	N 60TH AVE	60TH AVE / MERCER LN	4	30
ASPHALT_REPAIR	N 60TH AVE	60TH AVE / PEORIA AVE	5	34
ASPHALT_REPAIR	N 60TH AVE	60TH AVE / PEORIA AVE	7	34
ASPHALT_REPAIR	N 60TH AVE	60TH AVE / PEORIA AVE	5	34
ASPHALT_REPAIR	N 60TH DR	11022 N 60TH DR	5	29
ASPHALT_REPAIR	N 60TH DR	11022 N 60TH DR	4	29
ASPHALT_REPAIR	N 60TH DR	11200 N 60TH DR	3	20
ASPHALT_REPAIR	N 60TH DR	11236 N 60TH DR	8	20

**ASPHALT REMOVE/REPAIR AREA INDEX**

Treatment	Rd_Name	Location	Pvmt_Area (S.Y.)	Exhibit No.
ASPHALT_REPAIR	N 60TH DR	60TH DR / MESCAL ST	10	29
ASPHALT_REPAIR	N 60TH DR	60TH DR / SHANGRILA RD	5	20
ASPHALT_REPAIR	N 60TH DR	60TH DR / SHANGRILA RD	6	20
ASPHALT_REPAIR	N 61ST AVE	61ST AVE (60TH AVE - DESERT COVE AVE)	3	29
ASPHALT_REPAIR	N 61ST AVE	61ST AVE (60TH AVE - DESERT COVE AVE)	3	29
ASPHALT_REPAIR	N 61ST AVE	61ST AVE (60TH AVE - DESERT COVE AVE)	2	29
ASPHALT_REPAIR	N 61ST AVE	61ST AVE (60TH AVE - DESERT COVE AVE)	9	30
ASPHALT_REPAIR	N 65TH AVE	10601 N 65TH AVE	2	33
ASPHALT_REPAIR	N 65TH AVE	11263 N 65TH AVE	3	19
ASPHALT_REPAIR	N 65TH AVE	65TH AVE / BECKER LN	12	33
ASPHALT_REPAIR	N 65TH AVE	65TH AVE / CHRISTY DR	8	28
ASPHALT_REPAIR	N 65TH AVE	65TH AVE / CHRISTY DR	8	28
ASPHALT_REPAIR	N 65TH AVE	65TH AVE / COPPERWOOD ELEMENTARY SOUTH ENTRANCE	20	19
ASPHALT_REPAIR	N 65TH AVE	65TH AVE / COPPERWOOD ELEMENTARY SOUTH ENTRANCE	16	19
ASPHALT_REPAIR	N 65TH AVE	65TH AVE / DESERT COVE AVE	8	28
ASPHALT_REPAIR	N 65TH AVE	65TH AVE / MERCER LN	12	28
ASPHALT_REPAIR	N 65TH AVE	65TH AVE / MERCER LN	4	28
ASPHALT_REPAIR	N 65TH AVE	65TH AVE / MESCAL ST	9	28
ASPHALT_REPAIR	N 65TH AVE	65TH AVE / MESCAL ST	9	28
ASPHALT_REPAIR	N 66TH AVE	10604 N 66TH AVE	10	28
ASPHALT_REPAIR	N 66TH AVE	66TH AVE (SAGUARO DR - BECKER LN)	3	33
ASPHALT_REPAIR	N 66TH AVE	66TH AVE (SAGUARO DR - BECKER LN)	2	33
ASPHALT_REPAIR	N 66TH AVE	66TH AVE (SAGUARO DR - BECKER LN)	2	33
ASPHALT_REPAIR	N 66TH AVE	66TH AVE (SAGUARO DR - BECKER LN)	4	33
ASPHALT_REPAIR	N 66TH AVE	66TH AVE / PEORIA AVE	4	33
ASPHALT_REPAIR	N 66TH AVE	66TH AVE / PEORIA AVE	6	33
ASPHALT_REPAIR	N 66TH AVE	66TH AVE / PEORIA AVE	2	33
ASPHALT_REPAIR	N 66TH DR	10816 N 66TH DR	8	28
ASPHALT_REPAIR	N 66TH DR	10846 N 66TH DR	8	28
ASPHALT_REPAIR	N 66TH DR	11003 N 66TH DR	4	28
ASPHALT_REPAIR	N 66TH DR	11004 N 66TH DR	4	28
ASPHALT_REPAIR	N 66TH DR	11009 N 66TH DR	6	28
ASPHALT_REPAIR	N 66TH DR	11010 N 66TH DR	6	28
ASPHALT_REPAIR	N 66TH DR	66TH DR / CHRISTY DR	1	28
ASPHALT_REPAIR	N 66TH DR	66TH DR / CHRISTY DR	3	28
ASPHALT_REPAIR	N 66TH DR	66TH DR / DESERT COVE AVE	12	28
ASPHALT_REPAIR	N 66TH DR	66TH DR / DESERT COVE AVE	7	28
ASPHALT_REPAIR	N 66TH DR	66TH DR / DESERT COVE AVE	9	28

**ASPHALT REMOVE/REPAIR AREA INDEX**

Treatment	Rd_Name	Location	Pvmt_Area (S.Y.)	Exhibit No.
ASPHALT_REPAIR	N 66TH DR	66TH DR / DESERT COVE AVE	11	28
ASPHALT_REPAIR	N 66TH DR	66TH DR / DESERT COVE AVE	2	28
ASPHALT_REPAIR	N 67TH AVE	67TH AVE / CHRISTY DR	11	27
ASPHALT_REPAIR	N 67TH AVE	67TH AVE / DESERT COVE AVE	3	27
ASPHALT_REPAIR	N 67TH AVE	67TH AVE / DESERT COVE AVE	4	27
ASPHALT_REPAIR	N 67TH AVE	67TH AVE / DESERT COVE AVE	12	27
ASPHALT_REPAIR	N 68TH AVE	68TH AVE / FRIER DR	8	44
ASPHALT_REPAIR	N 68TH AVE	68TH AVE / FRIER DR	7	44
ASPHALT_REPAIR	N 68TH AVE	7838 N 68TH AVE	1	41
ASPHALT_REPAIR	N 69TH AVE	69TH AVE / BELMONT AVE	67	43
ASPHALT_REPAIR	N 69TH AVE	69TH AVE / BELMONT AVE	5	43
ASPHALT_REPAIR	N 69TH AVE	69TH AVE / BELMONT AVE	4	43
ASPHALT_REPAIR	N 69TH AVE	69TH AVE / BELMONT AVE	8	43
ASPHALT_REPAIR	N 69TH AVE	69TH AVE / BELMONT AVE	4	43
ASPHALT_REPAIR	N 69TH AVE	69TH AVE / FRIER DR	33	43
ASPHALT_REPAIR	N 69TH AVE	69TH AVE / FRIER DR	7	43
ASPHALT_REPAIR	N 69TH AVE	69TH AVE / FRIER DR	2	43
ASPHALT_REPAIR	N 69TH AVE	69TH AVE / FRIER DR	10	43
ASPHALT_REPAIR	N 69TH AVE	7505 N 69TH AVE	8	45
ASPHALT_REPAIR	N 69TH AVE	7515 N 69TH AVE	20	45
ASPHALT_REPAIR	N 69TH AVE	7541 N 69TH AVE	9	43
ASPHALT_REPAIR	N 69TH AVE	7541 N 69TH AVE	12	43
ASPHALT_REPAIR	N 69TH AVE	7551 N 69TH AVE	89	43
ASPHALT_REPAIR	N 69TH AVE	7551 N 69TH AVE	6	43
ASPHALT_REPAIR	N 69TH DR	69th DR / ZOE ELLA WAY	40	5
ASPHALT_REPAIR	N 70TH AVE	7010 N 70TH AVE	4	43
ASPHALT_REPAIR	N 70TH AVE	7010 N 70TH AVE	4	43
ASPHALT_REPAIR	N 70TH AVE	7010 N 70TH AVE	2	43
ASPHALT_REPAIR	N 70TH AVE	70TH AVE / AUGUSTA AVE	14	40
ASPHALT_REPAIR	N 70TH AVE	70TH AVE / AUGUSTA AVE	4	40
ASPHALT_REPAIR	N 70TH AVE	70TH AVE / FRIER DR	8	43
ASPHALT_REPAIR	N 70TH AVE	70TH AVE / FRIER DR	8	43
ASPHALT_REPAIR	N 70TH AVE	70TH AVE / FRIER DR	4	43
ASPHALT_REPAIR	N 70TH AVE	70TH AVE / NORTHERN AVE	35	40
ASPHALT_REPAIR	N 70TH AVE	70TH AVE / NORTHERN AVE	2	40
ASPHALT_REPAIR	N 70TH AVE	70TH AVE / NORTHERN AVE	41	40
ASPHALT_REPAIR	N 71ST AVE	71ST AVE / FRIER DR	5	42
ASPHALT_REPAIR	N 71ST AVE	71ST AVE / FRIER DR	25	42

ASPHALT REMOVE/REPAIR AREA INDEX

Treatment	Rd Name	Location	Pvmt Area (S.Y.)	Exhibit No.
ASPHALT_REPAIR	N 71ST AVE	71ST AVE / FRIER DR	9	42
ASPHALT_REPAIR	N 71ST AVE	71ST AVE / FRIER DR	2	42
ASPHALT_REPAIR	N 77TH AVE	5806 N 77TH AVE	3	50
ASPHALT_REPAIR	N 77TH AVE	77TH AVE / RANCHO DR	10	50
ASPHALT_REPAIR	N 78TH AVE	5925 N 78TH AVE	9	50
ASPHALT_REPAIR	N 78TH DR	5922 N 78TH DR	13	50
ASPHALT_REPAIR	N 81ST LN	81ST LN / LAMAR RD	59	46
ASPHALT_REPAIR	N 81ST LN	81ST LN / LAMAR RD	6	46
ASPHALT_REPAIR	N 81ST LN	81ST LN / LAMAR RD	2	46
ASPHALT_REPAIR	N 83RD AVE	83RD AVE / OREGON AVE	13	54
ASPHALT_REPAIR	N 85TH AVE	85TH AVE / PASADENA AVE	14	55
ASPHALT_REPAIR	N 85TH AVE	85TH AVE / PASADENA AVE	4	55
ASPHALT_REPAIR	N 85TH AVE	85TH AVE / PASADENA AVE	7	55
ASPHALT_REPAIR	N 86TH AVE	5039 N 86TH AVE	20	55
ASPHALT_REPAIR	N 86TH AVE	5040 N 86TH AVE	16	55
ASPHALT_REPAIR	N 86TH AVE	86TH AVE / PASADENA AVE	9	55
ASPHALT_REPAIR	N 86TH AVE	86TH AVE / PASADENA AVE	16	55
ASPHALT_REPAIR	N 86TH DR	86TH DR / PASADENA AVE	16	55
ASPHALT_REPAIR	N 87TH AVE	5019 N 87TH AVE	26	55
ASPHALT_REPAIR	N 87TH AVE	5019 N 87TH AVE	11	55
ASPHALT_REPAIR	N 87TH AVE	5037 N 87TH AVE	28	55
ASPHALT_REPAIR	N 87TH AVE	87TH AVE / CAMELBACK RD	17	55
ASPHALT_REPAIR	N 87TH AVE	87TH AVE / PASADENA AVE	6	55
ASPHALT_REPAIR	N 87TH AVE	87TH AVE / PASADENA AVE	4	55
ASPHALT_REPAIR	N 87TH AVE	87TH AVE / PASADENA AVE	15	55
ASPHALT_REPAIR	N 87TH AVE	87TH AVE / PASADENA AVE	22	55
ASPHALT_REPAIR	N 87TH AVE	87TH AVE / PASADENA AVE	4	55
ASPHALT_REPAIR	N 87TH AVE	87TH AVE / WINDSOR BLVD	17	55
ASPHALT_REPAIR	N 87TH AVE	87TH AVE / WINDSOR BLVD	2	16
ASPHALT_REPAIR	W ALTADENA AVE	5245 W ALTADENA AVE	2	40
ASPHALT_REPAIR	W AUGUSTA AVE	7021 W AUGUSTA AVE	2	39
ASPHALT_REPAIR	W AUGUSTA AVE	7077 W AUGUSTA AVE	13	39
ASPHALT_REPAIR	W AUGUSTA AVE	7080 W AUGUSTA AVE	10	39
ASPHALT_REPAIR	W CHRISTY DR	6526 W CHRISTY DR	4	28
ASPHALT_REPAIR	W CHRISTY DR	6607 W CHRISTY DR	9	28
ASPHALT_REPAIR	W CHRISTY DR	6607 W CHRISTY DR	6	28
ASPHALT_REPAIR	W CHRISTY DR	6613 W CHRISTY DR	9	28
ASPHALT_REPAIR	W CHRISTY DR	6637 W CHRISTY DR	13	28
ASPHALT_REPAIR	W CHRISTY DR	6649 W CHRISTY DR	5	28

**ASPHALT REMOVE/REPAIR AREA INDEX**

Treatment	Rd_Name	Location	Pvmt_Area (S.Y.)	Exhibit No.
ASPHALT_REPAIR	W CORTEZ ST	5250 W CORTEZ ST	8	24
ASPHALT_REPAIR	W DESERT COVE AVE	5907 W DESERT COVE AVE	13	30
ASPHALT_REPAIR	W DESERT COVE AVE	6000 W DESERT COVE AVE	12	30
ASPHALT_REPAIR	W DESERT COVE AVE	6524 W DESERT COVE AVE	4	28
ASPHALT_REPAIR	W DESERT COVE AVE	6613 W DESERT COVE AVE	18	28
ASPHALT_REPAIR	W DESERT COVE AVE	6626 W DESERT COVE AVE	3	28
ASPHALT_REPAIR	W DESERT COVE AVE	6626 W DESERT COVE AVE	7	28
ASPHALT_REPAIR	W DIANA AVE	5415 W DIANA AVE	4	36
ASPHALT_REPAIR	W FRIER DR	6840 W FRIER DR	7	44
ASPHALT_REPAIR	W FRIER DR	FRIER DR (71ST AVE - 70TH AVE)	4	43
ASPHALT_REPAIR	W FRIER DR	FRIER DR (71ST AVE - 70TH AVE)	3	43
ASPHALT_REPAIR	W FRIER DR	FRIER DR (71ST AVE - 70TH AVE)	3	43
ASPHALT_REPAIR	W FRIER DR	FRIER DR (71ST AVE - 70TH AVE)	4	42
ASPHALT_REPAIR	W FRIER DR	FRIER DR (71ST AVE - 70TH AVE)	3	43
ASPHALT_REPAIR	W FRIER DR	FRIER DR (71ST AVE - 70TH AVE)	4	43
ASPHALT_REPAIR	W GARDEN DR	6042 W GARDEN DR	11	20
ASPHALT_REPAIR	W LUPINE AVE	5104 W LUPINE AVE	4	25
ASPHALT_REPAIR	W MERCER LN	6501 W MERCER LN	7	28
ASPHALT_REPAIR	W MERCER LN	6513 W MERCER LN	2	28
ASPHALT_REPAIR	W MERCER LN	6513 W MERCER LN	2	28
ASPHALT_REPAIR	W MERCER LN	6531 W MERCER LN	2	28
ASPHALT_REPAIR	W MERCER LN	6620 W MERCER LN	7	28
ASPHALT_REPAIR	W MERCER LN	6620 W MERCER LN	4	28
ASPHALT_REPAIR	W MERCER LN	6626 W MERCER LN	1	28
ASPHALT_REPAIR	W MERCER LN	6626 W MERCER LN	1	28
ASPHALT_REPAIR	W MERCER LN	6638 W MERCER LN	2	28
ASPHALT_REPAIR	W MERCER LN	6638 W MERCER LN	1	28
ASPHALT_REPAIR	W MERCER LN	6644 W MERCER LN	1	28
ASPHALT_REPAIR	W MERCER LN	6644 W MERCER LN	3	28
ASPHALT_REPAIR	W MESCAL ST	5622 W MESCAL ST	2	32
ASPHALT_REPAIR	W MESCAL ST	5627 W MESCAL ST	5	31
ASPHALT_REPAIR	W MESCAL ST	5652 W MESCAL ST	2	31
ASPHALT_REPAIR	W MESCAL ST	5658 W MESCAL ST	1	31
ASPHALT_REPAIR	W MESCAL ST	5809 W MESCAL ST	2	31
ASPHALT_REPAIR	W MESCAL ST	5827 W MESCAL ST	5	30
ASPHALT_REPAIR	W MESCAL ST	6048 W MESCAL ST	6	29
ASPHALT_REPAIR	W ORCHID LN	5346 W ORCHID LN	10	37
ASPHALT_REPAIR	W OREGON AVE	8346 W OREGON AVE	12	53

**ASPHALT REMOVE/REPAIR AREA INDEX**

Treatment	Rd Name	Location	Pvmt Area (S.Y.)	Exhibit No.
ASPHALT_REPAIR	W OREGON AVE	8383 W OREGON AVE	8	53
ASPHALT_REPAIR	W PASADENA AVE	8524 W PASADENA AVE	10	55
ASPHALT_REPAIR	W PASADENA AVE	8530 W PASADENA AVE	12	55
ASPHALT_REPAIR	W PASADENA AVE	8536 W PASADENA AVE	17	55
ASPHALT_REPAIR	W PASADENA AVE	8542 W PASADENA AVE	5	55
ASPHALT_REPAIR	W PASADENA AVE	8554 W PASADENA AVE	10	55
ASPHALT_REPAIR	W PASADENA AVE	8566 W PASADENA AVE	5	55
ASPHALT_REPAIR	W PASADENA AVE	8566 W PASADENA AVE	7	55
ASPHALT_REPAIR	W PASADENA AVE	8566 W PASADENA AVE	7	55
ASPHALT_REPAIR	W PASADENA AVE	8566 W PASADENA AVE	4	55
ASPHALT_REPAIR	W RACHO DR	7828 W RANCHO DR	1	50
ASPHALT_REPAIR	W RACHO DR	7832 W RANCHO DR	1	50
ASPHALT_REPAIR	W RANCHO DR	7835 W RANCHO DR	1	50
ASPHALT_REPAIR	W RANCHO DR	7836 W RANCHO DR	11	50
ASPHALT_REPAIR	W RANCHO DR	7844 W RANCHO DR	7	50
ASPHALT_REPAIR	W RIVIERA DR	5246 W RIVIERA DR	4	16
ASPHALT_REPAIR	W RIVIERA DR	5249 W RIVIERA DR	2	16
ASPHALT_REPAIR	W RIVIERA DR	5250 W RIVIERA DR	2	16
ASPHALT_REPAIR	W SAGUARO DR	6516 W SAGUARO DR	3	33
ASPHALT_REPAIR	W SAN JUAN AVE	7817 W SAN JUAN AVE	5	52
ASPHALT_REPAIR	W SELDON LN	5414 W SELDON LN	3	36
ASPHALT_REPAIR	W SELDON LN	5426 W SELDON LN	5	36
ASPHALT_REPAIR	W SHANGRILA RD	5603 W SHANGRILA RD	4	32
ASPHALT_REPAIR	W SHANGRILA RD	5638 W SHANGRILA RD	11	31
ASPHALT_REPAIR	W SHANGRILA RD	5801 W SHANGRILA RD	3	31
ASPHALT_REPAIR	W SHANGRILA RD	5802 W SHANGRILA RD	5	31
ASPHALT_REPAIR	W SHANGRILA RD	5940 W SHANGRI LA RD	14	30
ASPHALT_REPAIR	W SHANGRILA RD	6021 W SHANGRILA RD	3	21
ASPHALT_REPAIR	W SHANGRILA RD	6028 W SHANGRILA RD	17	20
ASPHALT_REPAIR	W SIERRA ST	5250 W SIERRA ST	3	16
ASPHALT_REPAIR	W SOLANO DR N	7803 W SOLANO DR N	9	50
ASPHALT_REPAIR	W SOLANO DR S	7735 W SOLANO DR S	4	50
ASPHALT_REPAIR	W SOLANO DR S	7805 W SOLANO DR	6	50
ASPHALT_REPAIR	W SOLANO DR S	7813 W SOLANO DR	6	50
ASPHALT_REPAIR	W SOLANO DR S	7845 W SOLANO DR S	6	50
ASPHALT_REPAIR	W SUNNYSIDE DR	5244 W SUNNYSIDE DR	8	16
ASPHALT_REPAIR	W SUNNYSIDE DR	5250 W SUNNYSIDE DR	11	16
ASPHALT_REPAIR	W SUNNYSIDE DR	5256 W SUNNYSIDE DR	8	16

**ASPHALT REMOVE/REPAIR AREA INDEX**

Treatment	Rd Name	Location	Pvmt Area (S.Y.)	Exhibit No.
ASPHALT REPAIR	W WINDSOR BLVD	8544 W WINDSOR BLVD	5	55
ASPHALT REPAIR	W WINDSOR BLVD	8567 W WINDSOR BLVD	8	55
ASPHALT REPAIR	W WINDSOR BLVD	8608 W WINDSOR BLVD	28	55
ASPHALT REPAIR	W WINDSOR BLVD	8614 W WINDSOR BLVD	6	55
ASPHALT REPAIR	W WINDSOR BLVD	8620 W WINDSOR BLVD	17	55
ASPHALT REPAIR	W YUCCA ST	YUCCA ST (58TH AVE - 57TH LN)	4	22
<b>TOTAL</b>			<b>2,992</b>	

**APPENDIX C**  
**CRACK SEAL INDEX**

CRACK SEAL INDEX

Treatment	Road Name	Road From	Road To	Road Length	Crack Seal (LF)	Exhibit No.
CRACK SEAL	N 50TH AVE	W CHOLLA ST	W SUNNYSIDE DR	1,320	6,801	26, 18
CRACK SEAL	N 51ST DR	W CORTEZ ST	W SIERRA ST	250	2,992	25, 17
CRACK SEAL	N 52ND AVE	W ALTADENA AVE	W SUNNYSIDE DR	270	3,231	17
CRACK SEAL	N 52ND AVE	W CHOLLA ST	W LUPINE AVE	270	3,231	25
CRACK SEAL	N 52ND AVE	W LUPINE AVE	W CORTEZ ST	250	2,992	25
CRACK SEAL	N 52ND AVE	W POINSETTIA DR	END OF PAVEMENT	150	1,795	17
CRACK SEAL	N 52ND AVE	W SIERRA ST	W ALTADENA AVE	270	3,231	17
CRACK SEAL	N 52ND AVE	W SUNNYSIDE DR	W POINSETTIA DR	260	3,112	17
CRACK SEAL	N 52ND DR	W POINSETTIA DR	W RIVIERA DR	250	2,992	16
CRACK SEAL	N 53RD AVE	W ALTADENA AVE	W SUNNYSIDE DR	265	3,964	16
CRACK SEAL	N 53RD AVE	W CHOLLA ST	W LUPINE AVE	290	4,338	24
CRACK SEAL	N 53RD AVE	W CORTEZ ST	W SIERRA ST	250	3,740	24, 16
CRACK SEAL	N 53RD AVE	W LUPINE AVE	W CORTEZ ST	250	3,740	24
CRACK SEAL	N 53RD AVE	W POINSETTIA DR	W RIVIERA DR	255	3,815	16
CRACK SEAL	N 53RD AVE	W RIVIERA DR	W CACTUS RD	800	11,968	16, 15
CRACK SEAL	N 53RD AVE	W SIERRA ST	W ALTADENA AVE	265	3,964	16
CRACK SEAL	N 53RD AVE	W SUNNYSIDE DR	W POINSETTIA DR	255	3,815	16
CRACK SEAL	N 55TH DR	W MESCAL ST	W SHANGRILA RD	257	2,813	32
CRACK SEAL	N 55TH DR	W YUCCA ST	W GARDEN DR	257	2,813	23
CRACK SEAL	N 56TH DR	W MESCAL ST	W SHANGRILA RD	257	2,813	31
CRACK SEAL	N 56TH DR	W YUCCA ST	W GARDEN DR	257	2,813	22
CRACK SEAL	N 57TH AVE	W DESERT COVE AVE	W MESCAL ST	266	3,639	31
CRACK SEAL	N 57TH AVE	W MESCAL ST	W YUCCA ST	518	7,086	31, 22
CRACK SEAL	N 57TH AVE	W YUCCA ST	W CHOLLA ST	532	7,278	22
CRACK SEAL	N 59TH DR	W DESERT COVE AVE	W SHANGRILA RD	425	4,243	30
CRACK SEAL	N 59TH DR	W SHANGRILA RD	W YUCCA ST	315	3,145	21
CRACK SEAL	N 59TH DR	W YUCCA ST	W GARDEN DR	270	2,696	21
CRACK SEAL	N 59TH LN	W DESERT COVE AVE	END OF PAVEMENT	240	2,396	30
CRACK SEAL	N 60TH AVE	N 61ST AVE	W MERCER LN	665	6,017	30
CRACK SEAL	N 60TH AVE	W DESERT COVE AVE	W DESERT COVE AVE	300	2,995	30
CRACK SEAL	N 60TH AVE	W DESERT COVE AVE	W MESCAL ST	220	2,196	30
CRACK SEAL	N 60TH AVE	W MERCER LN	W DESERT COVE AVE	245	3,669	30
CRACK SEAL	N 60TH AVE	W MESCAL ST	W GARDEN DR	770	7,688	30, 21
CRACK SEAL	N 60TH AVE	W PEORIA AVE	N 61ST AVE	725	6,224	34, 35, 30
CRACK SEAL	N 60TH DR	END OF PAVEMENT	W DESERT COVE AVE	235	2,346	29
CRACK SEAL	N 60TH DR	W DESERT COVE AVE	W MESCAL ST	255	2,546	29
CRACK SEAL	N 60TH DR	W MESCAL ST	W SHANGRILA RD	245	2,446	29, 20
CRACK SEAL	N 60TH DR	W SHANGRILA RD	N 60TH CT	680	6,789	20, 21
CRACK SEAL	N 61ST AVE	N 60TH AVE	W CHOLLA ST	2,195	27,394	30, 29, 20
CRACK SEAL	N 65TH AVE	W BECKER LN	W CHRISTY DR	560	8,333	33
CRACK SEAL	N 65TH AVE	W CHRISTY DR	W MERCER LN	250	3,720	28
CRACK SEAL	N 65TH AVE	W DESERT COVE AVE	W MESCAL ST	345	5,134	28
CRACK SEAL	N 65TH AVE	W MERCER LN	W DESERT COVE AVE	345	5,134	28

CRACK SEAL INDEX

Treatment	Road Name	Road From	Road To	Road Length	Crack Seal (LF)	Exhibit No.
CRACK SEAL	N 65TH AVE	W MESCAL ST	W CHOLLA ST	980	14,582	28, 19
CRACK SEAL	N 65TH AVE	W PEORIA AVE	W BECKER LN	180	2,678	33
CRACK SEAL	N 66TH AVE	W BECKER LN	W SAGUARO DR	270	3,214	33
CRACK SEAL	N 66TH AVE	W PEORIA AVE	W BECKER LN	190	2,262	33
CRACK SEAL	N 66TH AVE	W SAGUARO DR	W CHRISTY DR	275	3,274	33, 28
CRACK SEAL	N 66TH DR	W CHRISTY DR	W MERCER LN	250	2,976	28
CRACK SEAL	N 66TH DR	W DESERT COVE AVE	W MESCAL ST	340	4,047	28
CRACK SEAL	N 66TH DR	W MERCER LN	W DESERT COVE AVE	260	3,095	28
CRACK SEAL	N 68TH AVE	W FRIER DR	W NORTHERN AVE	1,320	21,648	44, 41
CRACK SEAL	N 69TH AVE	PRIVATE DR	W BELMONT AVE	282	2,312	43
CRACK SEAL	N 69TH AVE	W BELMONT AVE	W FRIER DR	495	4,059	43
CRACK SEAL	N 69TH AVE	W ORANGEWOOD AVE	PRIVATE DR	542	4,444	45, 43
CRACK SEAL	N 69TH DR	W MARY JANE LN	W CAROL ANN WAY	252	2,141	5
CRACK SEAL	N 69TH DR	W ZOE ELLA WAY	W KAREN LEE LN	252	2,141	5
CRACK SEAL	N 70TH AVE	N 70TH AVE	W NORTHERN AVE	585	9,594	40
CRACK SEAL	N 70TH AVE	W AUGUSTA AVE	N 70TH AVE	178	2,919	40
CRACK SEAL	N 70TH AVE	W CAROL ANN WAY	W NANCY RD	257	2,183	5, 3
CRACK SEAL	N 70TH AVE	W FRIER DR	W AUGUSTA AVE	695	11,398	43, 40
CRACK SEAL	N 70TH AVE	W GREENWAY RD	W ZOE ELLA WAY	227	1,929	5
CRACK SEAL	N 77TH AVE	W MONTEBELLO AVE	W SOLANO DR S	255	4,366	50
CRACK SEAL	N 77TH AVE	W PALO VERDE DR	W BETHANY HOME ROAD	190	3,253	50
CRACK SEAL	N 77TH AVE	W RANCHO DR	W PALO VERDE DR	545	9,330	50
CRACK SEAL	N 77TH AVE	W SAN MIGUEL AVE	W MONTEBELLO AVE	261	4,468	52, 50
CRACK SEAL	N 77TH AVE	W SOLANO DR S	W RANCHO DR	230	3,938	50
CRACK SEAL	N 77TH DR	W RANCHO DR	END OF PAVEMENT	206	2,821	50
CRACK SEAL	N 78TH AVE	W PALO VERDE DR	W SOLANO DR N	254	3,479	50
CRACK SEAL	N 78TH DR	END OF PAVEMENT	W SAN JUAN AVE	113	1,548	52
CRACK SEAL	N 78TH DR	W SAN JUAN AVE	W SAN JUAN AVE	335	4,588	52
CRACK SEAL	N 78TH DR	W SAN JUAN AVE	N 78TH DR	312	4,273	52
CRACK SEAL	N 78TH DR	W SOLANO DR N	W SAN MIGUEL AVE	271	3,712	52
CRACK SEAL	N 78TH DR	W MONTEBELLO AVE	W PALO VERDE DR	295	4,081	50
CRACK SEAL	N 79TH AVE	W RANCHO DR	W SOLANO DR S	255	3,492	51, 49
CRACK SEAL	N 79TH AVE	W RANCHO DR	W RANCHO DR	125	1,712	49
CRACK SEAL	N 79TH AVE	W RANCHO DR	W SOLANO DR N	161	2,205	49
CRACK SEAL	N 79TH AVE	W SAN MIGUEL AVE	W MONTEBELLO AVE	275	3,766	51
CRACK SEAL	N 79TH AVE	W SOLANO DR N	W BETHANY HOME RD	515	7,053	49
CRACK SEAL	N 79TH AVE	W SOLANO DR S	W RANCHO DR	270	3,698	49
CRACK SEAL	N 79TH DR	W OCOTILLO RD	END OF PAVEMENT	485	9,405	48, 47
CRACK SEAL	N 80TH AVE	W LAMAR RD	W GLENDALE AVE	680	10,714	47
CRACK SEAL	N 80TH AVE	W OCOTILLO RD	W LAMAR RD	638	10,052	48, 47
CRACK SEAL	N 85TH DR	W WINDSOR BLVD	W MEDLOCK DR	250	2,736	55
CRACK SEAL	N 87TH AVE	W CAMELBACK RD	W PASADENA AVE	406	4,443	55
CRACK SEAL	N 87TH AVE	W PASADENA AVE	W WINDSOR BLVD	310	3,393	55

CRACK SEAL INDEX

Treatment	Road Name	Road From	Road To	Road Length	Crack Seal (LF)	Exhibit No.
CRACK SEAL	N 87TH AVE	W WINDSOR BLVD	W MEDLOCK DR	301	3,294	55
CRACK SEAL	W ALTADENA AVE	N 53RD AVE	N 52ND AVE	780	9,335	16, 17
CRACK SEAL	W AUGUSTA AVE	N 71ST AVE	N 70TH AVE	619	10,152	39, 40
CRACK SEAL	W BECKER LN	N 66TH AVE	N 65TH AVE	430	5,119	33
CRACK SEAL	W BELMONT AVE	N 69TH AVE	N 67TH AVE	1,325	21,730	49, 44
CRACK SEAL	W CAROL ANN WAY	N 70TH AVE	N 69TH DR	396	3,364	5
CRACK SEAL	W CAROL ANN WAY	N 71ST AVE	N 70TH AVE	679	5,769	5
CRACK SEAL	W CHRISTY DR	N 66TH AVE	N 65TH AVE	480	5,714	28
CRACK SEAL	W CHRISTY DR	N 66TH DR	N 66TH AVE	535	6,369	28
CRACK SEAL	W CHRISTY DR	N 67TH AVE	N 66TH DR	190	2,262	27, 28
CRACK SEAL	W CORTEZ ST	N 52ND AVE	N 51ST DR	250	2,992	25
CRACK SEAL	W CORTEZ ST	N 53RD AVE	N 52ND AVE	900	10,771	24, 25
CRACK SEAL	W DESERT COVE AVE	N 57TH AVE	N 55TH AVE	885	12,107	32
CRACK SEAL	W DESERT COVE AVE	N 57TH AVE	N 57TH AVE	432	5,910	31
CRACK SEAL	W DESERT COVE AVE	N 57TH DR	N 57TH AVE	268	2,750	31
CRACK SEAL	W DESERT COVE AVE	N 58TH DR	N 5TH DR	860	8,824	30, 31
CRACK SEAL	W DESERT COVE AVE	N 59TH AVE	N 58TH DR	190	1,949	30
CRACK SEAL	W DESERT COVE AVE	N 59TH LN	N 59TH DR	135	1,348	30
CRACK SEAL	W DESERT COVE AVE	N 60TH AVE	N 59TH LN	245	2,446	30
CRACK SEAL	W DESERT COVE AVE	N 60TH DR	N 60TH AVE	495	4,942	29, 30
CRACK SEAL	W DESERT COVE AVE	N 66TH DR	N 65TH AVE	1,015	15,103	28
CRACK SEAL	W DESERT COVE AVE	N 67TH AVE	N 66TH DR	190	2,827	27, 28
CRACK SEAL	W FRIER DR	N 68TH AVE	N 67TH AVE	445	7,298	44
CRACK SEAL	W FRIER DR	N 69TH AVE	N 68TH AVE	880	14,432	43, 44
CRACK SEAL	W FRIER DR	N 70TH AVE	N 69TH AVE	459	3,764	43
CRACK SEAL	W FRIER DR	N 71ST AVE	W FRIER DR	712	11,677	42, 43
CRACK SEAL	W GARDEN DR	W FRIER DR	N 70TH AVE	175	2,870	43
CRACK SEAL	W GARDEN DR	N 55TH DR	N 55TH AVE	280	3,064	23
CRACK SEAL	W GARDEN DR	N 56TH DR	N 55TH DR	772	8,449	22, 23
CRACK SEAL	W GARDEN DR	N 60TH AVE	N 59TH DR	470	4,692	21
CRACK SEAL	W GARDEN DR	N 60TH CT	N 60TH AVE	275	2,746	21
CRACK SEAL	W KAREN LEE LN	N 69TH DR	N 69TH AVE	257	2,183	5, 6
CRACK SEAL	W KAREN LEE LN	W GREENWAY RD	N 69TH DR	917	7,791	5
CRACK SEAL	W LUPINE AVE	N 52ND AVE	END OF PAVEMENT	325	3,890	25
CRACK SEAL	W LUPINE AVE	N 53RD AVE	N 52ND AVE	900	10,771	24, 25
CRACK SEAL	W MARY JANE LN	N 69TH DR	N 69TH AVE	257	2,183	5, 6
CRACK SEAL	W MARY JANE LN	N 71ST AVE	N 69TH DR	1,191	10,119	5

CRACK SEAL INDEX

Treatment	Road Name	Road From	Road To	Road Length	Crack Seal (LF)	Exhibit No.
CRACK SEAL	W MERCER LN	N 59TH AVE	N 60TH AVE	325	4,563	30
CRACK SEAL	W MERCER LN	N 66TH DR	N 65TH AVE	1,010	12,023	28
CRACK SEAL	W MESCAL ST	N 56TH DR	N 55TH DR	772	8,449	31, 32
CRACK SEAL	W MESCAL ST	N 57TH AVE	N 56TH DR	268	2,933	31
CRACK SEAL	W MESCAL ST	N 60TH DR	N 60TH AVE	465	4,643	29, 30
CRACK SEAL	W MESCAL ST	N 66TH DR	N 65TH AVE	1,010	12,023	28
CRACK SEAL	W MONTEBELLO AVE	N 79TH AVE	N 77TH AVE	1,200	20,544	51, 52, 50
CRACK SEAL	W OREGON AVE	END OF PAVEMENT	N 83RD AVE	660	5,869	53, 54
CRACK SEAL	W PALO VERDE DR	END OF PAVEMENT	N 77TH AVE	290	3,972	50
CRACK SEAL	W PALO VERDE DR	N 78TH DR	N 78TH AVE	537	7,355	50
CRACK SEAL	W POINSETTIA DR	N 52ND DR	N 52ND AVE	315	3,770	16, 17
CRACK SEAL	W POINSETTIA DR	N 53RD AVE	N 52ND DR	420	5,027	16
CRACK SEAL	W RANCHO DR	N 77TH DR	N 77TH AVE	237	3,246	50
CRACK SEAL	W RANCHO DR	N 79TH AVE	END OF PAVEMENT	165	2,260	49, 50
CRACK SEAL	W RANCHO DR	N 79TH AVE	W SOLANO DR S	419	5,739	49, 50
CRACK SEAL	W RANCHO DR	W RANCHO DR	N 77TH DR	550	7,533	50
CRACK SEAL	W RANCHO DR	W SOLANO DR S	W RANCHO DR	159	2,178	50
CRACK SEAL	W RIVIERA DR	N 53RD AVE	N 52ND DR	445	5,326	16
CRACK SEAL	W SAGUARO DR	N 66TH AVE	N 66TH AVE	205	2,440	33
CRACK SEAL	W SAN JUAN AVE	N 78TH DR	N 78TH DR	874	11,970	52
CRACK SEAL	W SAN MIGUEL AVE	N 78TH DR	END OF PAVEMENT	384	5,259	52
CRACK SEAL	W SAN MIGUEL AVE	N 79TH AVE	N 78TH DR	136	1,863	51, 52
CRACK SEAL	W SHANGRI LA RD	END OF PAVEMENT	N 59TH DR	245	2,446	21
CRACK SEAL	W SHANGRI LA RD	N 60TH DR	END OF PAVEMENT	240	2,396	20, 21
CRACK SEAL	W SHANGRILA RD	N 55TH DR	N 55TH AVE	279	3,053	32
CRACK SEAL	W SHANGRILA RD	N 56TH DR	N 55TH DR	772	8,449	31, 32
CRACK SEAL	W SIERRA ST	N 51ST DR	N 51ST AVE	185	2,214	17
CRACK SEAL	W SIERRA ST	N 52ND AVE	N 51ST DR	375	4,488	17
CRACK SEAL	W SIERRA ST	N 53RD AVE	N 52ND AVE	780	9,335	16, 17
CRACK SEAL	W SOLANO DR N	N 78TH DR	N 78TH AVE	581	7,957	50
CRACK SEAL	W SOLANO DR N	N 79TH AVE	N 78TH DR	175	2,397	49, 50
CRACK SEAL	W SOLANO DR S	W RANCHO DR	N 77TH AVE	852	11,669	50
CRACK SEAL	W SUNNYSIDE DR	N 51ST AVE	N 50TH AVE	670	4,202	17, 18
CRACK SEAL	W SUNNYSIDE DR	N 53RD AVE	N 52ND AVE	780	9,335	16, 17
CRACK SEAL	W WINDSOR BLVD	N 87TH AVE	N 85TH DR	934	10,222	55
CRACK SEAL	W YUCCA ST	END OF PAVEMENT	N 59TH DR	205	2,047	21
CRACK SEAL	W YUCCA ST	N 56TH DR	N 55TH DR	772	8,449	22, 23
CRACK SEAL	W YUCCA ST	N 57TH AVE	N 56TH DR	269	2,944	22
CRACK SEAL	W ZOE ELLA WAY	N 70TH AVE	N 69TH DR	396	3,364	5
CRACK SEAL	W ZOE ELLA WAY	W GREENWAY RD	N 70TH AVE	281	2,387	5
<b>TOTAL</b>					<b>894,854</b>	

**APPENDIX D**  
**SINGLE SLURRY SEAL INDEX**

**SINGLE SLURRY INDEX**

Treatment	Road Name	Road From	Road To	Road Length	Pvmt Width	Pvmt Area (S.Y.)	Exhibit No.
SINGLE SLURRY	N 50TH AVE	W CHOLLA ST	W SUNNYSIDE DR	1,320	22	3,227	26, 18
SINGLE SLURRY	N 51ST DR	W CORTEZ ST	W SIERRA ST	250	32	889	26, 17
SINGLE SLURRY	N 52ND AVE	W POINSETTIA DR	END OF PAVEMENT	150	32	533	17
SINGLE SLURRY	N 52ND AVE	W SUNNYSIDE DR	W POINSETTIA DR	260	32	924	17
SINGLE SLURRY	N 52ND AVE	W ALTADENA AVE	W SUNNYSIDE DR	270	32	960	17
SINGLE SLURRY	N 52ND AVE	W SIERRA ST	W ALTADENA AVE	270	32	960	17
SINGLE SLURRY	N 52ND AVE	W LUPINE AVE	W CORTEZ ST	250	32	889	25
SINGLE SLURRY	N 52ND AVE	W CHOLLA ST	W LUPINE AVE	270	32	960	25
SINGLE SLURRY	N 52ND DR	W POINSETTIA DR	W RIVIERA DR	250	32	889	16
SINGLE SLURRY	N 53RD AVE	W CHOLLA ST	W LUPINE AVE	290	40	1,289	24
SINGLE SLURRY	N 53RD AVE	W LUPINE AVE	W CORTEZ ST	250	40	1,111	24
SINGLE SLURRY	N 53RD AVE	W CORTEZ ST	W SIERRA ST	250	40	1,111	24, 16
SINGLE SLURRY	N 53RD AVE	W SIERRA ST	W ALTADENA AVE	265	40	1,178	16
SINGLE SLURRY	N 53RD AVE	W ALTADENA AVE	W SUNNYSIDE DR	265	40	1,178	16
SINGLE SLURRY	N 53RD AVE	W SUNNYSIDE DR	W POINSETTIA DR	255	40	1,133	16
SINGLE SLURRY	N 53RD AVE	W POINSETTIA DR	W RIVIERA DR	255	40	1,133	16
SINGLE SLURRY	N 53RD AVE	W RIVIERA DR	W CACTUS RD	800	40	3,556	16, 15
SINGLE SLURRY	N 53RD DR	W ORCHID LN	W DIANA AVE	260	32	924	37
SINGLE SLURRY	N 53RD DR	W FREEWAY LN	W ORCHID LN	255	32	907	37
SINGLE SLURRY	N 53RD DR	W SELDON LN	W FREEWAY LN	255	32	907	37
SINGLE SLURRY	N 54TH DR	W DIANA AVE	W BARBARA AVE	270	32	960	37
SINGLE SLURRY	N 54TH DR	W ORCHID LN	W DIANA AVE	260	32	924	36
SINGLE SLURRY	N 54TH DR	W BUTLER DR	W SELDON LN	275	32	978	38, 36
SINGLE SLURRY	N 55TH DR	W MESCAL ST	W SHANGRI LA RD	260	32	924	32
SINGLE SLURRY	N 55TH DR	W YUCCA ST	W GARDEN DR	260	32	924	23
SINGLE SLURRY	N 56TH DR	W MESCAL ST	W SHANGRI LA RD	260	32	924	31
SINGLE SLURRY	N 56TH DR	W YUCCA ST	W GARDEN DR	260	32	924	22
SINGLE SLURRY	N 57TH AVE	W DESERT COVE AVE	W MESCAL ST	270	40	1,200	31
SINGLE SLURRY	N 57TH AVE	W MESCAL ST	W YUCCA ST	520	40	2,311	31, 22
SINGLE SLURRY	N 57TH AVE	W YUCCA ST	W CHOLLA ST	535	40	2,378	22
SINGLE SLURRY	N 59TH DR	W DESERT COVE AVE	W SHANGRI LA RD	425	32	1,511	30
SINGLE SLURRY	N 59TH DR	W SHANGRI LA RD	W YUCCA ST	315	32	1,120	21
SINGLE SLURRY	N 59TH DR	W YUCCA ST	W GARDEN DR	270	32	960	21
SINGLE SLURRY	N 59TH LN	W DESERT COVE AVE	END OF PAVEMENT	240	32	853	30
SINGLE SLURRY	N 60TH AVE	W PEORIA AVE	N 61ST AVE	725	29	2,336	34, 35, 30
SINGLE SLURRY	N 60TH AVE	N 61ST AVE	W MERCER LN	665	29	2,143	30
SINGLE SLURRY	N 60TH AVE	W MERCER LN	W DESERT COVE AVE	245	45	1,225	30
SINGLE SLURRY	N 60TH AVE	W DESERT COVE AVE	W DESERT COVE AVE	300	32	1,067	30
SINGLE SLURRY	N 60TH AVE	W DESERT COVE AVE	W MESCAL ST	220	32	782	30
SINGLE SLURRY	N 60TH AVE	W MESCAL ST	W GARDEN DR	770	32	2,738	30, 21
SINGLE SLURRY	N 60TH AVE	W GARDEN DR	W CHOLLA ST	165	32	587	21
SINGLE SLURRY	N 60TH CT	END OF PAVEMENT	W GARDEN DR	210	32	747	21
SINGLE SLURRY	N 60TH DR	END OF PAVEMENT	W DESERT COVE AVE	235	32	836	29
SINGLE SLURRY	N 60TH DR	W DESERT COVE AVE	W MESCAL ST	255	32	907	29
SINGLE SLURRY	N 60TH DR	W MESCAL ST	W SHANGRI LA RD	245	32	871	29, 20
SINGLE SLURRY	N 60TH DR	W SHANGRI LA RD	N 60TH CT	680	32	2,418	20, 21

SINGLE SLURRY INDEX

Treatment	Road Name	Road From	Road To	Road Length	Pvmt Width	Pvmt Area (S.Y.)	Exhibit No.
SINGLE_SLURRY	N 61ST AVE	N 60TH AVE	W CHOLLA ST	2,195	40	9,756	30, 29, 20
SINGLE_SLURRY	N 64TH AVE	W CORRINE DR	W ASTER DR	455	32	1,618	12, 9
SINGLE_SLURRY	N 65TH AVE	W BECKER LN	W CHRISTY DR	560	40	2,489	33, 28
SINGLE_SLURRY	N 65TH AVE	W PEORIA AVE	W BECKER LN	180	40	800	33
SINGLE_SLURRY	N 65TH AVE	W CHRISTY DR	W MERCER LN	250	40	1,111	28
SINGLE_SLURRY	N 65TH AVE	W MERCER LN	W DESERT COVE AVE	345	40	1,533	28
SINGLE_SLURRY	N 65TH AVE	W DESERT COVE AVE	W MESCAL ST	345	40	1,533	28
SINGLE_SLURRY	N 65TH AVE	W MESCAL ST	W CHOLLA ST	980	40	4,356	28, 19
SINGLE_SLURRY	N 65TH AVE	W ASTER DR	W SWEETWATER AVE	500	32	1,778	8
SINGLE_SLURRY	N 65TH AVE	W CACTUS RD	W WETHERSFIELD RD	270	32	960	13
SINGLE_SLURRY	N 65TH AVE	W WETHERSFIELD RD	W BLOOMFIELD RD	460	32	1,636	13
SINGLE_SLURRY	N 65TH AVE	W BLOOMFIELD RD	W LARKSPUR DR	460	32	1,636	11
SINGLE_SLURRY	N 65TH DR	END OF PAVEMENT	W BLOOMFIELD RD	290	32	1,031	13, 11
SINGLE_SLURRY	N 66TH AVE	W PEORIA AVE	W BECKER LN	190	32	676	33
SINGLE_SLURRY	N 66TH AVE	W BECKER LN	W SAGUARO DR	270	32	960	33
SINGLE_SLURRY	N 66TH AVE	W SAGUARO DR	W CHRISTY DR	275	32	978	33, 28
SINGLE_SLURRY	N 66TH AVE	W BLOOMFIELD RD	END OF PAVEMENT	290	32	1,031	11
SINGLE_SLURRY	N 66TH DR	W CHRISTY DR	W MERCER LN	250	32	889	28
SINGLE_SLURRY	N 66TH DR	W MERCER LN	W DESERT COVE AVE	260	32	924	28
SINGLE_SLURRY	N 66TH DR	W DESERT COVE AVE	W MESCAL ST	340	32	1,209	28
SINGLE_SLURRY	N 66TH DR	W BLOOMFIELD RD	W CORRINE DR	715	32	2,542	11
SINGLE_SLURRY	N 66TH DR	W CORRINE DR	W ASTER DR	540	32	1,920	11, 8
SINGLE_SLURRY	N 67TH DR	W CAROL ANN WAY	W NANCY RD	260	25	722	6, 4
SINGLE_SLURRY	N 67TH DR	W KAREN LEE LN	W MARY JANE LN	255	25	708	6
SINGLE_SLURRY	N 67TH DR	W ZOE ELLA WAY	W KAREN LEE LN	255	25	708	6
SINGLE_SLURRY	N 68TH AVE	W FRIER DR	NORTHERN AVE	1,320	40	5,867	44, 41
SINGLE_SLURRY	N 68TH AVE	W GREENWAY RD	W ZOE ELLA WAY	255	25	708	6
SINGLE_SLURRY	N 68TH DR	W MARY JANE LN	W CAROL ANN WAY	255	25	708	6
SINGLE_SLURRY	N 68TH DR	W ZOE ELLA WAY	W KAREN LEE LN	255	25	708	6
SINGLE_SLURRY	N 69TH AVE	W BELMONT AVE	W FRIER DR	495	20	1,100	43
SINGLE_SLURRY	N 69TH AVE	W ORANGEWOOD AVE	W BELMONT AVE	835	20	1,856	45, 43
SINGLE_SLURRY	N 69TH AVE	W KAREN LEE LN	W MARY JANE LN	255	25	708	6
SINGLE_SLURRY	N 69TH AVE	W GREENWAY RD	W KAREN LEE LN	505	25	1,403	6
SINGLE_SLURRY	N 69TH AVE	W MARY JANE LN	W PARADISE LN	1,830	36	7,320	6, 4, 2
SINGLE_SLURRY	N 69TH DR	W MARY JANE LN	W CAROL ANN WAY	252	22	616	5
SINGLE_SLURRY	N 69TH DR	W ZOE ELLA WAY	W KAREN LEE LN	252	22	616	5
SINGLE_SLURRY	N 70TH AVE	W FRIER DR	W AUGUSTA AVE	700	40	3,111	43, 40
SINGLE_SLURRY	N 70TH AVE	W AUGUSTA AVE	W NORTHERN AVE	765	40	3,400	40
SINGLE_SLURRY	N 70TH AVE	W CAROL ANN WAY	W NANCY RD	256	22	626	3, 5
SINGLE_SLURRY	N 70TH AVE	W GREENWAY RD	W ZOE ELLA WAY	226	22	552	5
SINGLE_SLURRY	N 71ST AVE	W NANCY RD	W PARADISE LN	1,320	40	5,867	3, 1
SINGLE_SLURRY	N 77TH AVE	W RANCHO DR	W PALO VERDE DR	545	40	2,422	50
SINGLE_SLURRY	N 77TH AVE	W SOLANO DR S	W RANCHO DR	230	40	1,022	50
SINGLE_SLURRY	N 77TH AVE	W PALO VERDE DR	W BETHANY HOME RD	190	40	844	50
SINGLE_SLURRY	N 77TH AVE	W SAN MIGUEL AVE	W MONTEBELLO AVE	260	40	1,156	52, 50
SINGLE_SLURRY	N 77TH AVE	W MONTEBELLO AVE	W SOLANO DR S	255	40	1,133	50

SINGLE SLURRY INDEX

Treatment	Road Name	Road From	Road To	Road Length	Pvmt Width	Pvmt Area (S.Y.)	Exhibit No.
SINGLE_SLURRY	N 77TH DR	W RANCHO DR	END OF PAVEMENT	210	32	747	50
SINGLE_SLURRY	N 78TH AVE	W SOLANO DR N	W PALO VERDE DR	255	32	907	50
SINGLE_SLURRY	N 78TH DR	W SAN JUAN AVE	W SAN JUAN AVE	650	32	2,311	52
SINGLE_SLURRY	N 78TH DR	END OF PAVEMENT	W SAN JUAN AVE	115	32	409	52
SINGLE_SLURRY	N 78TH DR	W SAN JUAN AVE	W SAN MIGUEL AVE	270	32	960	52
SINGLE_SLURRY	N 78TH DR	W SOLANO DR N	W PALO VERDE DR	295	32	1,049	50
SINGLE_SLURRY	N 79TH AVE	W SAN MIGUEL AVE	W MONTEBELLO AVE	275	32	978	51
SINGLE_SLURRY	N 79TH AVE	W MONTEBELLO AVE	W RANCHO DR	255	32	907	51, 49
SINGLE_SLURRY	N 79TH AVE	W SOLANO DR	W RANCHO DR	270	32	960	49
SINGLE_SLURRY	N 79TH AVE	W SOLANO DR	W SOLANO DR N	285	32	1,013	49
SINGLE_SLURRY	N 79TH AVE	W SOLANO DR N	W BETHANY HOME ROAD	515	32	1,831	49
SINGLE_SLURRY	N 79TH DR	W OCOTILLO RD	END OF PAVEMENT	485	32	1,724	48, 47
SINGLE_SLURRY	N 80TH AVE	W OCOTILLO RD	W LAMAR RD	640	26	1,849	48, 47
SINGLE_SLURRY	N 80TH AVE	W LAMAR RD	W GLENDALE AVE	680	26	1,964	47
SINGLE_SLURRY	N 85TH DR	W WINDSOR BLVD	W MEDLOCK DR	250	32	889	55
SINGLE_SLURRY	N 85TH DR	END OF PAVEMENT	W PASADENA AVE	385	32	1,369	55
SINGLE_SLURRY	N 86TH AVE	END OF PAVEMENT	W PASADENA AVE	305	32	1,084	55
SINGLE_SLURRY	N 86TH DR	END OF PAVEMENT	W PASADENA AVE	300	32	1,067	55
SINGLE_SLURRY	W ALTADENA AVE	N 53RD AVE	W PASADENA AVE	780	32	2,773	16, 17
SINGLE_SLURRY	W ASTER DR	N 64TH AVE	N 63RD AVE	750	32	2,667	9
SINGLE_SLURRY	W ASTER DR	N 66TH DR	N 65TH AVE	960	32	3,413	8
SINGLE_SLURRY	W AUGUSTA AVE	N 71ST AVE	N 70TH AVE	620	40	2,756	39, 40
SINGLE_SLURRY	W BECKER LN	N 66TH AVE	N 65TH AVE	430	32	1,529	33
SINGLE_SLURRY	W BELMONT AVE	N 69TH AVE	N 67TH AVE	1,325	40	5,889	43, 44
SINGLE_SLURRY	W BLOOMFIELD RD	N 67TH AVE	N 66TH DR	390	32	1,387	10, 11
SINGLE_SLURRY	W BLOOMFIELD RD	N 66TH DR	N 66TH AVE	370	32	1,316	11
SINGLE_SLURRY	W BLOOMFIELD RD	N 66TH AVE	N 65TH DR	235	32	836	11
SINGLE_SLURRY	W BLOOMFIELD RD	N 65TH DR	N 66TH AVE	380	32	1,351	11, 13
SINGLE_SLURRY	W BLOOMFIELD RD	N 65TH AVE	N 63RD AVE	1,105	32	3,929	11, 12
SINGLE_SLURRY	W CAROL ANN WAY	N 68TH DR	N 67TH DR	445	25	1,236	6
SINGLE_SLURRY	W CAROL ANN WAY	N 67TH DR	N 67TH AVE	630	25	1,750	6, 7
SINGLE_SLURRY	W CAROL ANN WAY	N 71ST AVE	N 70TH AVE	678	22	1,657	5
SINGLE_SLURRY	W CAROL ANN WAY	N 70TH AVE	N 69TH DR	396	21	924	5
SINGLE_SLURRY	W CHRISTY DR	N 67TH AVE	N 66TH DR	190	32	676	27, 28
SINGLE_SLURRY	W CHRISTY DR	N 66TH DR	N 66TH AVE	535	32	1,902	28
SINGLE_SLURRY	W CHRISTY DR	N 66TH AVE	N 65TH AVE	480	32	1,707	28
SINGLE_SLURRY	W CORRINE DR	N 66TH DR	N 64TH AVE	1,450	32	5,156	11, 12
SINGLE_SLURRY	W CORRINE DR	N 64TH AVE	N 63RD AVE	740	32	2,631	12
SINGLE_SLURRY	W CORTEZ ST	N 53RD AVE	N 52ND AVE	900	32	3,200	24, 25
SINGLE_SLURRY	W CORTEZ ST	N 52ND AVE	N 51ST DR	250	32	889	25
SINGLE_SLURRY	W DESERT COVE AVE	N 59TH AVE	N 57TH AVE	1,320	30	4,400	30, 31
SINGLE_SLURRY	W DESERT COVE AVE	N 57TH AVE	N 55TH AVE	1,315	40	5,844	31, 32
SINGLE_SLURRY	W DESERT COVE AVE	N 66TH DR	N 65TH AVE	1,015	40	4,511	28
SINGLE_SLURRY	W DESERT COVE AVE	N 67TH AVE	N 66TH DR	190	40	844	27, 28
SINGLE_SLURRY	W DESERT COVE AVE	N 60TH AVE	N 59TH LN	245	32	871	30
SINGLE_SLURRY	W DESERT COVE AVE	N 59TH LN	N 59TH DR	135	32	480	30

SINGLE SLURRY INDEX

Treatment	Road Name	Road From	Road To	Road Length	Pvmt Width	Pvmt Area (S.Y.)	Exhibit No.
SINGLE_SLURRY	W DESERT COVE AVE	N 60TH DR	N 60TH AVE	495	32	1,760	29, 30
SINGLE_SLURRY	W DIANA AVE	N 54TH DR	N 54TH AVE	445	32	1,582	36, 37
SINGLE_SLURRY	W DIANA AVE	N 54TH AVE	N 54TH AVE	345	32	1,227	37
SINGLE_SLURRY	W FREEWAY LN	N 53RD DR	N 53RD DR	1,060	32	3,769	36, 37
SINGLE_SLURRY	W FRIER DR	N 68TH AVE	N 67TH AVE	445	40	1,978	44
SINGLE_SLURRY	W FRIER DR	N 69TH AVE	N 68TH AVE	880	40	3,911	43, 44
SINGLE_SLURRY	W FRIER DR	N 70TH AVE	N 69TH AVE	460	40	2,044	43
SINGLE_SLURRY	W FRIER DR	N 71ST AVE	N 70TH AVE	886	40	3,849	42, 43
SINGLE_SLURRY	W GARDEN DR	N 56TH DR	N 55TH DR	775	32	2,756	22, 23
SINGLE_SLURRY	W GARDEN DR	N 57TH DR	N 56TH AVE	280	32	996	23
SINGLE_SLURRY	W GARDEN DR	N 60TH CT	N 60TH AVE	275	32	978	21
SINGLE_SLURRY	W GARDEN DR	N 60TH AVE	N 59TH DR	470	32	1,671	21
SINGLE_SLURRY	W KAREN LEE LN	N 69TH AVE	N 68TH DR	260	25	722	6
SINGLE_SLURRY	W KAREN LEE LN	N 68TH DR	N 67TH DR	445	25	1,236	6
SINGLE_SLURRY	W KAREN LEE LN	N 67TH DR	END OF PAVEMENT	145	25	403	6
SINGLE_SLURRY	W KAREN LEE LN	N 69TH DR	N 69TH AVE	257	24	685	5,6
SINGLE_SLURRY	W KAREN LEE LN	W GREENWAY RD	N 69TH DR	917	24	2,445	5
SINGLE_SLURRY	W LARKSPUR DR	N 65TH AVE	N 63RD AVE	1,160	32	4,124	11, 12
SINGLE_SLURRY	W LUPINE AVE	N 53RD AVE	N 52ND AVE	900	32	3,200	24, 25
SINGLE_SLURRY	W LUPINE AVE	N 52ND AVE	END OF PAVEMENT	325	32	1,156	25
SINGLE_SLURRY	W MARY JANE LN	N 69TH AVE	N 68TH DR	260	25	722	6
SINGLE_SLURRY	W MARY JANE LN	N 68TH DR	N 67TH DR	445	25	1,236	6
SINGLE_SLURRY	W MARY JANE LN	N 67TH DR	N 67TH AVE	630	25	1,750	6, 7
SINGLE_SLURRY	W MARY JANE LN	N 71ST AVE	N 69TH DR	1,191	23	3,044	5
SINGLE_SLURRY	W MARY JANE LN	N 69TH DR	N 69TH AVE	257	23	657	5, 6
SINGLE_SLURRY	W MERCER LN	N 66TH DR	N 65TH AVE	1,010	32	3,591	28
SINGLE_SLURRY	W MERCER LN	N 59TH AVE	N 60TH AVE	325	45	1,625	30
SINGLE_SLURRY	W MESCAL ST	N 57TH AVE	N 56TH DR	270	32	960	31
SINGLE_SLURRY	W MESCAL ST	N 56TH DR	N 55TH DR	775	32	2,756	31, 32
SINGLE_SLURRY	W MESCAL ST	N 66TH DR	N 65TH AVE	1,010	32	3,591	28
SINGLE_SLURRY	W MESCAL ST	N 60TH DR	N 60TH AVE	465	32	1,653	29, 30
SINGLE_SLURRY	W MONTEBELLO	N 79TH AVE	N 77TH AVE	1,200	40	5,333	51, 52, 50
SINGLE_SLURRY	W ORCHID LN	N 55TH AVE	N 54TH DR	270	32	960	36
SINGLE_SLURRY	W ORCHID LN	N 53RD DR	N 53RD AVE	260	32	924	37
SINGLE_SLURRY	W ORCHID LN	N 54TH DR	N 53RD DR	790	32	2,809	36, 37
SINGLE_SLURRY	W OREGON AVE	END OF PAVEMENT	N 83RD AVE	940	32	3,342	53, 54
SINGLE_SLURRY	W PALO VERDE DR	N 78TH DR	N 78TH AVE	540	32	1,920	50
SINGLE_SLURRY	W PALO VERDE DR	END OF PAVEMENT	N 77TH AVE	290	32	1,031	50
SINGLE_SLURRY	W PASADENA AVE	N 87TH AVE	N 86TH DR	305	32	1,084	55
SINGLE_SLURRY	W PASADENA AVE	N 86TH DR	N 86TH AVE	290	32	1,031	55
SINGLE_SLURRY	W PASADENA AVE	N 86TH AVE	N 85TH DR	260	32	924	55
SINGLE_SLURRY	W PASADENA AVE	N 85TH DR	N 85TH AVE	345	32	1,227	55
SINGLE_SLURRY	W POINSETTIA DR	N 53RD AVE	N 52ND DR	420	32	1,493	16
SINGLE_SLURRY	W POINSETTIA DR	N 52ND DR	N 52ND AVE	315	32	1,120	16, 17
SINGLE_SLURRY	W RANCHO DR	N 77TH DR	N 77TH AVE	240	32	853	50
SINGLE_SLURRY	W RANCHO DR	W SOLANO DR	N 77TH DR	710	32	2,524	50

**SINGLE SLURRY INDEX**

Treatment	Road Name	Road From	Road To	Road Length	Pvmt Width	Pvmt Area (S.Y.)	Exhibit No.
SINGLE SLURRY	W RANCHO DR	N 79TH AVE	END OF PAVEMENT	160	32	569	49, 50
SINGLE SLURRY	W RIVIERA DR	N 53RD AVE	N 52ND DR	445	32	1,582	16
SINGLE SLURRY	W SAGUARO DR	N 66TH AVE	END OF PAVEMENT	205	32	729	33
SINGLE SLURRY	W SAN JUAN AVE	N 78TH DR	N 78TH DR	875	32	3,111	52
SINGLE SLURRY	W SAN MIGUEL AVE	N 79TH AVE	N 78TH DR	140	32	498	51, 52
SINGLE SLURRY	W SAN MIGUEL AVE	N 78TH DR	END OF PAVEMENT	385	32	1,369	52
SINGLE SLURRY	W SELDON LN	N 54TH DR	N 53RD DR	790	32	2,809	36, 37
SINGLE SLURRY	W SHANGRI LA RD	N 56TH DR	N 55TH DR	775	32	2,756	31, 32
SINGLE SLURRY	W SHANGRI LA RD	N 55TH DR	N 55TH AVE	280	32	996	32
SINGLE SLURRY	W SHANGRI LA RD	N 60TH DR	END OF PAVEMENT	240	32	1,564	20, 21
SINGLE SLURRY	W SHANGRI LA RD	END OF PAVEMENT	N 59TH DR	245	32	1,564	21
SINGLE SLURRY	W SIERRA ST	N 53RD AVE	N 52ND AVE	780	32	2,773	16, 17
SINGLE SLURRY	W SIERRA ST	N 52ND AVE	N 51ST DR	375	32	1,333	17
SINGLE SLURRY	W SIERRA ST	N 51ST DR	N 51ST AVE	185	32	658	17
SINGLE SLURRY	W SOLANO DR	W RANCHO DR	N 77TH AVE	855	32	3,040	50
SINGLE SLURRY	W SOLANO DR	N 79TH AVE	W RANCHO DR	420	32	1,493	49, 50
SINGLE SLURRY	W SOLANO DR N	N 79TH AVE	N 78TH DR	175	42	817	49, 50
SINGLE SLURRY	W SOLANO DR N	N 78TH DR	N 78TH AVE	585	32	2,080	50
SINGLE SLURRY	W SUNNYSIDE DR	N 51ST AVE	N 50TH AVE	670	32	2,382	17, 18
SINGLE SLURRY	W SUNNYSIDE DR	N 53RD AVE	N 52ND AVE	780	32	2,773	16, 17
SINGLE SLURRY	W WETHERSFIELD RD	N 65TH AVE	N 63RD AVE	1,095	32	3,893	13, 14
SINGLE SLURRY	W WINDSOR BLVD	N 87TH AVE	N 85TH DR	935	32	3,324	55
SINGLE SLURRY	W YUCCA ST	N 57TH AVE	N 56TH DR	270	32	960	22
SINGLE SLURRY	W YUCCA ST	N 56TH DR	N 55TH DR	775	32	2,756	22, 23
SINGLE SLURRY	W YUCCA ST	END OF PAVEMENT	N 59TH DR	205	32	729	21
SINGLE SLURRY	W ZOE ELLA WAY	N 68TH DR	N 68TH AVE	265	25	736	6
SINGLE SLURRY	W ZOE ELLA WAY	N 68TH AVE	N 67TH DR	185	25	514	6
SINGLE SLURRY	W ZOE ELLA WAY	N 67TH DR	END OF PAVEMENT	145	25	403	6
SINGLE SLURRY	W ZOE ELLA WAY	W GREENWAY RD	N 70TH AVE	281	24	749	5
SINGLE SLURRY	W ZOE ELLA WAY	N 70TH AVE	N 69TH DR	396	23	1,012	5
<b>TOTAL</b>						<b>370,622</b>	

**APPENDIX E**  
**DOUBLE SLURRY SEAL INDEX**

DOUBLE SLURRY INDEX

Treatment	Road Name	Road From	Road To	Road Length	Pvmt Width	Pvmt Area (\$ Y.)	Exhibit No.
DOUBLE SLURRY	N 57TH DR	W DESERT COVE AVE	W MESCAL ST	270	32	960	31
DOUBLE SLURRY	N 57TH DR	W MESCAL ST	W SHANGRI LA RD	265	32	942	31
DOUBLE SLURRY	N 57TH DR	W YUCCA ST	END OF PAVEMENT	220	32	782	22
DOUBLE SLURRY	N 57TH LN	W YUCCA ST	END OF PAVEMENT	325	32	1,156	22
DOUBLE SLURRY	N 58TH AVE	W YUCCA ST	W CHOLLA ST	530	32	1,884	22
DOUBLE SLURRY	N 58TH DR	W DESERT COVE AVE	W MESCAL ST	270	32	960	30
DOUBLE SLURRY	N 58TH DR	W MESCAL ST	W SHANGRI LA RD	265	32	942	30
DOUBLE SLURRY	N 58TH DR	W SHANGRI LA RD	W YUCCA ST	265	32	942	30,21
DOUBLE SLURRY	N 58TH DR	W YUCCA ST	END OF PAVEMENT	235	32	836	21
DOUBLE SLURRY	N 81ST DR	W LAMAR RD	W GLENDALE AVE	800	28	2,489	46
DOUBLE SLURRY	N 81ST LN	W LAMAR RD	W GLENDALE AVE	800	28	2,489	46
DOUBLE SLURRY	N 87TH AVE	W CAMELBACK RD	W PASADENA AVE	410	24	1,093	55
DOUBLE SLURRY	N 87TH AVE	W PASADENA AVE	W WINDSOR BLVD	310	24	827	55
DOUBLE SLURRY	N 87TH AVE	W WINDSOR BLVD	W MEDLOCK DR	300	24	800	55
DOUBLE SLURRY	W BEHREND DR	N 67TH AVE	N 66TH AVE	700	38	2,956	56
DOUBLE SLURRY	W LAMAR RD	END OF PAVEMENT	N 81ST LN	120	12	160	46
DOUBLE SLURRY	W LAMAR RD	N 81ST DR	N 81 ST AVE	320	28	996	46,47
DOUBLE SLURRY	W MESCAL ST	N 81ST LN	N 81ST DR	270	16	480	46
DOUBLE SLURRY	W SHANGRI LA RD	N 58TH DR	N 57TH DR	860	32	3,058	30,31
DOUBLE SLURRY	W YUCCA ST	N 58TH DR	N 57TH DR	860	32	3,058	30,31
DOUBLE SLURRY	W YUCCA ST	N 57TH DR	N 57TH AVE	280	32	996	22
DOUBLE SLURRY	W YUCCA ST	N 57TH LN	N 57TH DR	270	32	960	22
DOUBLE SLURRY	W YUCCA ST	N 58TH AVE	N 57TH LN	255	32	907	22
DOUBLE SLURRY	W YUCCA ST	N 58TH DR	N 58TH AVE	330	32	1,173	21,22
<b>TOTAL</b>							<b>31,844</b>