

*LOS ANGELES DISTRICT
U.S. ARMY CORPS OF ENGINEERS*

DEPARTMENT OF THE ARMY PERMIT

Permittee: Maricopa County Department of Transportation; Ben Markert

Permit Number: SPL-2008-00925-KAT

Issuing Office: Los Angeles District

Note: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: To permanently discharge fill onto 2.186 acre(s) of waters of the U.S., and to temporarily discharge fill onto 2.279 acre(s) of waters of the U.S. pursuant to Section 404 of the Clean Water Act of 1972, in association with the Northern Avenue, Dysart Road to 111th Avenue project (Tracs 000 MA MMA SZ 046 01C) as shown on the attached drawings.

Specifically, you are authorized to:

Unnamed Wash:

1. Install 403 linear feet of 36-inch rubber gasket reinforced concrete pipe.
2. Construct an approximately 40-foot wide trapezoidal concrete lined channel with a 100-foot by 100-foot riprap apron.
3. Impact .0586 acre permanently and .0038 acre temporarily due to access and construction.

Agua Fria River:

1. Construction of a 30-foot wide temporary asphalt road.
2. Construct a 595-foot long by 148.9-foot wide, five-span AASHTO Type V Concrete Girder Bridge.
3. Construct 4 piers, each of which include eight 48-inch diameter columns on 60-inch diameter drilled shafts.
4. Construct bridge abutments with approximately 450-foot long by 50-foot wide cement stabilized alluvium guidebanks.

5. Excavate a 5-foot depth in an area approximately 600 by 500 linear feet with River and floodplain.
6. Impact 2.1273 acre permanently and 2.2747 acre temporarily due to access and construction.

Project Location: The project is located along Northern Avenue from MP 4.50 to MP 7.00, with the Agua Fria River located at MP 6.02, and an unnamed wash at MP 5.20. This project is located in the Cities of El Mirage, Glendale and Peoria, Maricopa County, Arizona. The cadastral coordinates are within portions of Section 1, T2N, R1W. Refer to USGS 7.5' Quadrangle: El Mirage, Arizona (1982).

Permit Conditions:

General Conditions:

1. The time limit for completing the authorized activity ends on **June 2, 2019**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification from this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. A conditioned water quality certification from the Arizona Department of Environmental Quality has been issued dated May 28, 2014, for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished with the terms and conditions of your permit.

Special Conditions:

1. The permittee shall mitigate for the permanent loss of 2.1273 acres of waters of the United States associated with the bridge and roadway improvements for the Agua Fria River project. **The permittee shall purchase .5318 (2.1273 acres at .25:1) credits from an approved program sponsor's In-Lieu Fee Program.** The permittee shall submit the funds to the approved sponsor. A copy of the transmittal letter to the sponsor will be submitted to the Corps after the sponsor has signed and acknowledged payment. **The permittee shall submit the check to the Corps by December 31, 2014.**
2. **The construction limits for all work within waters of the U.S. shall be fenced, staked, or flagged prior to construction.** The contractor(s) shall be thoroughly familiar with each of the project boundaries, and all perimeter markings shall be maintained intact for the life of the project. The contractor shall monitor each of the construction zones during the entire length of the contract to ensure fencing, staking, or flagging remains in place and that no vegetation is disturbed outside of the construction limits.
3. **The permittee shall provide notification, either written or verbal, to the Corps of Engineers at least one week prior to the start of work, as to the anticipated beginning and ending dates of construction.** The permittee shall maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit.
4. **A copy of the permit shall be on the job site at all times during construction.** The permittee shall provide a copy of this permit to all construction representatives. The permittee shall require that all construction representatives read this authorization in its entirety and acknowledge they understand its contents and their responsibility to ensure compliance with all general and special conditions contained herein.
5. **The permittee shall comply with all the requirements and conditions of the Programmatic Agreement** among the Federal Highway Administration, the Arizona State Historic Preservation Office, the Arizona Department of Transportation, Maricopa County Department of Transportation, Flood Control District of Maricopa County, Salt River Project, Bureau of Reclamation, Luke Air Force Base, City of Glendale, City of Peoria, City of El Mirage, U.S. Army Corps of Engineers, Fort McDowell Yavapai Nation, Gila Rive Indian Community, Ak-Chin Indian Community, Salt River Pima-Maricopa Indian Community, Hopi Tribe, Yavapai-Apache Nation, San Carlos Apache Nation, Tohono O'Odham Nation and The Arizona State Museum regarding the historic properties on the Northern Parkway (SR 303 to US 60). This requirement is meant to assure compliance with the permittee's responsibilities under Section 106 of the National Historic Preservation Act. A copy of the agreement is enclosed.
6. The permittee shall ensure that all project areas disturbed by construction-related activities are stabilized and restored to their pre-project conditions/contours, to the maximum extent possible, upon project completion. Watercourse morphology shall be re-established to match pre-construction configurations. Areas disturbed above the ordinary high water mark will be reseeded with a locally native plant species.

7. The permittee shall not discharge dredged or fill material while constructing this project or any other phase of this project, other than the permitted activities identified above.

Further Information:

1. Congressional Authorities. You have been authorized to undertake the activity described above pursuant to:

- () Section 10 of the River and Harbor Act of 1899 (33 U.S.C. 403).
- (X) Section 404 of the Clean Water Act (33 U.S.C. 1344).
- () Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

- a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
- b. This permit does not grant any property rights or exclusive privileges.
- c. This permit does not authorize any injury to the property or rights of others.
- d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
- c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
- d. Design or construction deficiencies associated with the permitted work.
- e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measure ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give you favorable consideration to a request for an extension of this time limit. Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

Ben Marshall
PERMITTEE

June 2, 2014
DATE

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

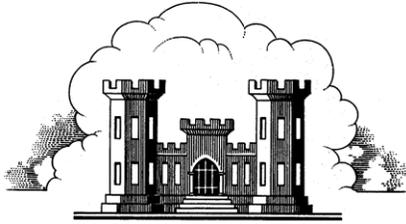
Sallie Diebold

3 June 2014
DATE

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

TRANSFEEEE

DATE



**LOS ANGELES DISTRICT
U.S. ARMY CORPS OF ENGINEERS**

**NOTIFICATION OF COMMENCEMENT OF WORK
FOR
DEPARTMENT OF THE ARMY PERMIT**

Permit Number: *SPL-2008-00925-KAT*
Name of Permittee: *Ben Markert, Maricopa County Department of Transportation*
Date of Issuance: *June 3, 2014*

Upon initiation of the activity authorized by this permit and the mitigation required by this permit, sign this certificate, and return it by **ONE** of the following methods;

1) Email a digital scan of the signed certificate to Kathleen.A.Tucker@usace.army.mil

OR

2) Mail the signed certificate to

U.S. Army Corps of Engineers
ATTN: Regulatory Division SPL-2008-00925-KAT
3636 N Central Avenue, Suite 900
Phoenix, AZ 85012-1939

I hereby certify that the authorized work and any required compensatory mitigation has been implemented in accordance with the Standard Individual Permit authorization, including all general, regional, or activity-specific conditions. Furthermore, if credits from a mitigation bank or in-lieu fee program were used to satisfy compensatory mitigation requirements, I have attached the documentation required by 33 CFR 332.3(1)(3) to confirm that the appropriate number and resource type of credits have been secured.

Please note that your permitted activity is subject to a compliance inspection by a Corps representative. If you fail to comply with this permit you may be subject to permit suspension, modification, or revocation. I hereby certify that I, and the contractor (if applicable), have read and agree to comply with the terms and conditions of the above referenced permit.

Signature of Permittee

Date



**LOS ANGELES DISTRICT
U.S. ARMY CORPS OF ENGINEERS**

**NOTIFICATION OF COMPLETION OF WORK AND
CERTIFICATION OF COMPLIANCE WITH
DEPARTMENT OF THE ARMY PERMIT**

Permit Number: *SPL-2008-00925-KAT*
Name of Permittee: *Ben Markert, Maricopa County Department of Transportation*
Date of Issuance: *June 3, 2014*

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Phoenix, AZ 85012-1939

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Signature of Permittee

Date



COPY

STATE OF ARIZONA
Clean Water Act Section 401 Water Quality Certification
U.S. Army Corps of Engineers File No.: SPL-2012-00915-KAT
ADEQ LTF No.: 59975

1. AUTHORIZATION

This State Water Quality Certification (Certification) is issued by the Arizona Department of Environmental Quality (ADEQ) under the authority of Section 401(a) of the federal Clean Water Act (CWA) (33 U.S.C. §1251 et seq.) and Arizona Revised Statutes Section 49-202. The conditions listed in Section 5.0 are in addition to conditions in the pending U.S. Army Corps of Engineers (CoE) Application No. SPL-2012-00915-KAT. These Certification conditions are enforceable by CoE. Civil penalties up to a maximum of \$25,000 per day of violation may be levied if these Certification conditions are violated. Criminal penalties may also be levied if a person knowingly violates any provision of the CWA.

Subject to the conditions in Section 5.0, ADEQ certifies that based on the information in Section 3.0, the activities proposed for the Northern Parkway - Dysart Road to 111th Avenue will not violate applicable surface water quality standards in the potentially impacted waterbodies including an unnamed ephemeral wash and the Agua Fria River near the cities of El Mirage, Glendale and Peoria, Maricopa County.

1.1. APPLICANT INFORMATION

Project Name: Northern Parkway - Dysart Road to 111th Avenue Project
Latitude: 33° 33' 03"; Longitude: 112° 19' 01"

Applicant: Maricopa County Department of Transportation
Ben Markert
2901 W. Durango Street
Phoenix, Arizona 85009

1.2. AUTHORIZING SIGNATURE



Linda Taunt, Deputy Director
Water Quality Division
Arizona Department of Environmental Quality

Signed this 28 day of May, 2014

2. DESCRIPTION OF ACTIVITIES TO BE CERTIFIED

The Maricopa County Department of Transportation proposes to widen Northern Avenue from Sarival Road to Grand Avenue in phases. Project limits for this segment of the Northern Parkway Program are from Dysart Road to 111th Avenue. This segment includes replacing the existing Northern Avenue two-lane at-grade crossing of the Agua Fria River with a fully access-controlled major-arterial bridge crossing. Drainage improvements are included for ultimate discharge to the Agua Fria River.

3. INFORMATION REVIEWED

During the development of this State Certification, ADEQ had access to and reviewed the following documents which are on file with ADEQ:

- 3.1. U.S. Army Corps of Engineers Public Notice / Application No. SPL-2012-00915-KAT. Comment period from 2/19/14 through 3/20/14.
- 3.2. CWA Section 401 Certification application package dated 3/11/14, and received by ADEQ on 3/17/14. Applicant: Ben Markert (Maricopa County Department of Transportation). Agent: Robin Shishido (Parsons Transportation Group).
- 3.3. Clean Water Act Section 404 Permit Application
- 3.4. State of Arizona Water Quality Standards for Surface Waters (WQS), Arizona Administrative Code (A.A.C.) Title 18, Chapter 11, Article 1. Designated uses for the potentially impacted waterbodies are: Aquatic and Wildlife ephemeral (A&We) and Partial Body Contact (PBC) and, for the Agua Fria River only: Agricultural - Livestock watering (AgL) (A.A.C. R18-11-105).
- 3.5. Descriptions, maps and design drawings submitted by the applicant.
- 3.6. Comments received in response to the public notice.

4. NOTIFICATION PROVISIONS

For any correspondence regarding this project, the ADEQ mailing address is:

Arizona Department of Environmental Quality
Robert Scalamera
Surface Water Section / 401 Certifications / mailstop 5415A-1
1110 West Washington Street
Phoenix, Arizona 85007

For questions or general comments:
email: rs3@azdeq.gov

Voice: (602) 771-4502

In any correspondence, reference:

Northern Parkway - Dysart Road to 111th Avenue Project
CoE File No.: SPL-2012-00915-KAT
ADEQ LTF No.: 59975
401 cert reading file: rs314:010

5. CONDITIONS FOR STATE 401 WATER QUALITY CERTIFICATION

For the purposes of this Certification the following definitions apply:

- Waters of the U.S. (WUS) as defined by the CoE and U.S. Environmental Protection Agency (EPA) under the Clean Water Act. This Certification applies only to activities within a WUS.
- Temporary means no longer than the period of this Certification.
- Native material/fill is defined as pollutant-free soil, sand, gravel or similar material from the streambed or banks in the immediate area of the permitted work.
- Emergency vehicles and emergency responders are not restricted by the conditions in this Certification.

5.1. General Conditions

- 5.1.1. ADEQ's State 401 Water Quality Certification of these activities proposed by the applicable CWA 404 Permit, does not affect or modify in any way the obligations or liability of any person for any damages, injury, or loss, resulting from these activities. This Certification is not intended to waive any other federal, state or local laws.
- 5.1.2. If monitoring, by ADEQ or others, indicates that water quality is adversely affected by the activities certified herein, ADEQ will notify the CoE and request suspension of the CWA 404 permit.
- 5.1.3. Issuance of a State 401 Water Quality Certification does not imply or suggest that requirements for other permits including, but not limited to Aquifer Protection Permits, Arizona Pollutant Discharge Elimination System Permits and Reclaimed Water permits are met or superseded. Applicant should contact ADEQ to ensure all applicable permits are obtained.
- 5.1.4. This Certification applies only to the activities described in Section 2.0 and is based upon the information listed in Section 3.0. This Certification is valid for the same period as the CWA 404 permit, as issued by the CoE. The applicant must apply for renewal, modification or extension of this Certification if the CWA 404 permit is renewed, modified, extended or otherwise changed. This Certification may be reopened, by ADEQ, at any time due to a change (i.e., lowered or more stringent) in a surface water quality standard for a parameter likely to result from project activities. ADEQ may add or modify conditions in this Certification to ensure that the applicant's activities comply with the most recent standard.
- 5.1.5. The applicant shall provide a copy of this Certification to all appropriate contractors and subcontractors. The applicant shall also post and maintain a legible copy of this Certification in a weather-resistant location at the construction site where it may be seen by the workers.
- 5.1.6. The applicant shall notify ADEQ of project completion within 30 days following project completion.

- 5.1.7. The applicant is responsible for all activities certified herein and any exceedences of WQS in any WUS that such activities may cause or contribute to.
- 5.1.8. This Certification does not authorize the discharge of mining, construction or demolition wastes, wastewater, process residues or other potential pollutants to any WUS except as specified in the application and supporting documents and allowed, specified or not prohibited in the CWA 404 permit or elsewhere in this Certification.

5.2. Specific Conditions

5.2.1. Erosion Prevention and Hydraulic Alterations

- 5.2.1.1. Clearing, grubbing, scraping or otherwise exposing erodible surfaces shall be minimized to the extent necessary for each construction phase or location.
- 5.2.1.2. Dredged or fill material shall be placed so that it is stable, meaning after placement, the material does not show signs of excessive erosion. Indicators of excess erosion include: gulying, head cutting, caving, block slippage, material sloughing, etc. Material shall not discharge (e.g., via leaching, runoff) harmful or toxic substances into streams or wetlands.
- 5.2.1.3. Erosion control, sediment control and/or bank protection measures shall be installed before construction and pre-operation activities, and shall be maintained during construction and post-construction periods to minimize channel or bank erosion, soil loss and sedimentation. Control measures shall not be constructed of uncemented or unconfined imported soil, or other materials easily transported by flow.
- 5.2.1.4. The effectiveness of all pollution control measures, including those preventing erosion and affecting sedimentation, shall be reevaluated after each flow event and repaired/modified as needed.
- 5.2.1.5. Direct runoff of water used for irrigation or dust control shall be limited to the extent practicable and shall not cause downstream erosion or flooding nor cause an exceedence of applicable water quality standards.
- 5.2.1.6. Except where the activities certified herein are intended to permanently alter any WUS, all disturbed areas shall be restored and (re)vegetated as indicated in the application documents if approved by the CoE (including offsite/in lieu mitigation). Denuded areas shall be revegetated as soon as physically practicable. Vegetation shall be maintained on unarmored banks and slopes to stabilize soil and prevent erosion. Fill used to support vegetation rooting or growth shall be protected from erosion.
- 5.2.1.7. If retention/detention basins are included in or added to the project, applicant will complete the grading necessary to direct runoff towards retention/detention basins no later than immediately following initial land clearing or rough grading.

- 5.2.1.8. Retention/detention basins shall be sized to accept storm runoff and capture sediment prior to it entering any WUS. Detention basins will provide detention through the use of controlled outflow spillways and shall cause no significant change to the hydraulic conditions of the upstream or downstream WUS outside of the project boundaries. The basins shall be maintained as needed to maintain functionality.
- 5.2.1.9. Activities herein certified shall, as much as practicable, be performed during periods of low flow (baseflow or less) in any perennial WUS, or no flow in the case of ephemeral and intermittent WUS. No work shall be done, nor shall any equipment or vehicles enter any WUS while flow is present, unless all conditions in this Certification are met.
- 5.2.1.10. When flow is present in any WUS within the project area, the applicant and any contractor will not alter the flow by any means except to prevent erosion or pollution of any WUS.
- 5.2.1.11. Any disturbance in the stream bank or streambed areas shall be stabilized to prevent erosion and sedimentation of the waterbody during and after operations. Any disturbed areas shall be contoured and vegetated as soon as practicable.
- 5.2.1.12. Applicant will take measures necessary to prevent approaches to any WUS crossing from causing erosion or contributing sediment to any WUS.
- 5.2.1.13. The applicant shall ensure no adverse change, due to the subject project, has occurred in the stability with respect to stream hydraulics, erosion and sediment load, of any WUS including upstream and downstream from the project. If such change has occurred, the applicant shall take steps to restore the pre-project stability of any impacted segments.

5.2.2. Sediment Loads

- 5.2.2.1. When flow in any WUS in the work area is sufficient to erode, carry or deposit material, activities certified herein shall cease until:
 - the flow decreases below the point where sediment movement ceases, or
 - control measures have been undertaken; e.g., equipment and materials easily transported by flow are protected with non-erodible barriers or moved outside the flow area.
- 5.2.2.2. Silt laden or turbid water resulting from activities certified herein shall be settled, filtered or otherwise treated to ensure no exceedence of, or reduction from, natural background levels of sediment occurs in any WUS.

- 5.2.2.3. Any washing or dewatering of fill material must occur outside of any WUS prior to placement and the rinseate from such washing shall be settled, filtered or otherwise treated to prevent migration of pollutants (including sediment) or from causing erosion to any WUS. Other than replacement of native fill or material used to support vegetation rooting or growth, fill placed in locations subject to scour must resist washout whether such resistance is derived via particle size limits, presence of a binder, vegetation, or other armoring.

5.2.3. Pollution Prevention

- 5.2.3.1. If activities certified herein are likely to cause or contribute to an exceedence of water quality standards - operations shall cease until the problem is resolved or until control measures have been undertaken.
- 5.2.3.2. Construction material and/or fill (other than native fill or that necessary to support re-vegetation) placed in any WUS, shall not include materials that can cause or contribute to pollution of the WUS. Examples of prohibited fill include pollutant-contaminated soil and materials defined as pollutants or hazardous in Arizona Revised Statutes (A.R.S.) § 49-201.
- 5.2.3.3. Acceptable construction materials that will or may contact water in any WUS are: untreated logs and lumber; natural stone (crushed or not), crushed clean concrete (recycled concrete); native fill; precast, sprayed or cast-in-place concrete (including soil cement and unmodified grouts); steel (including galvanized); plastic and aluminum. Use of other materials may be allowed, but require prior written approval from ADEQ.
- 5.2.3.4. The applicant will erect any barriers, covers, shields and other protective devices as necessary to prevent any construction materials, equipment or contaminants/pollutants from falling, being thrown or otherwise entering any WUS.
- 5.2.3.5. Area(s) must be designated, entirely outside of any WUS, for equipment staging and storage. In addition, the applicant must designate areas, located entirely outside of any WUS, for fuel, oil and other petroleum product storage and for solid waste containment. All precautions shall be taken to avoid the release of wastes, fuel or other pollutants to any WUS.
- 5.2.3.6. Any equipment maintenance, washing or fueling that cannot be done offsite will be performed in the designated area with the following exception: equipment too large or unwieldy to be readily moved; e.g., large cranes, may be fueled and serviced in the WUS (but outside of standing or flowing water) as long as material specifically manufactured and sold as spill containment is in place during fueling/servicing. All equipment shall be inspected for leaks, all leaks shall be repaired and all repaired equipment will be cleaned to remove any fuel or other fluid residue prior to use within (including crossing) any WUS.

- 5.2.3.7. A spill containment plan shall be maintained onsite to ensure that pollutants are prevented from entering any WUS. Any pollutant generated by activities certified herein shall be properly disposed of in accordance with applicable regulations.
- 5.2.3.8. A spill response kit will be maintained in this (these) area(s) to mitigate any spills. The kit will include material specifically manufactured and sold as spill adsorbent/absorbent and spill containment. The applicant will ensure that whenever there is activity on the site, that there are personnel on site trained in the proper response to spills and the use of spill response equipment.
- 5.2.3.9. Upon completion of the activities certified herein (except as noted in condition 4.2.3.10 - concrete curing), areas within any WUS shall be promptly cleared of all forms, piling, construction residues, equipment, debris or other obstructions.
- 5.2.3.10. If fully, partially or occasionally submerged structures are constructed of cast-in-place concrete instead of pre-cast concrete, applicant will take steps; e.g., sheet piling or temporary dams, to prevent contact between water (instream and runoff) and the concrete until it cures and until any curing agents have evaporated or otherwise cease to be available; i.e., are no longer a pollutant threat.
- 5.2.3.11. Washout of concrete handling equipment must not take place within any WUS and any washout runoff shall be prevented from entering any WUS.
- 5.2.3.12. Any permanent WUS crossings other than fords, shall not be equipped with gutters, drains, scuppers or other conveyances that allow untreated runoff (due to events equal to or lesser in magnitude than the design event for the crossing structure) to directly enter a WUS if such runoff can be directed to a local stormwater drainage, containment and/or treatment system.

5.2.4. Temporary and Permanent Structures

- 5.2.4.1. Permanent pipes, temporary pipes and culvert crossings shall be adequately sized to handle expected flow and properly set with end section, splash pads, headwalls or other structures that dissipate water energy to control erosion.
- 5.2.4.2. Debris will be cleared as needed from culverts, ditches, dips and other drainage structures in any WUS to prevent clogging or conditions that may lead to washout.
- 5.2.4.3. All temporary structures constructed of imported materials and all permanent structures, including but not limited to, access roadways; culvert crossings; staging areas; material stockpiles; berms, dikes and pads, shall be constructed so as to accommodate overtopping and resist washout by streamflow.

- 5.2.4.4. Any temporary crossing, other than fords on native material, shall be constructed in such a manner so as to provide armoring of the stream channel. Materials used to provide this armoring shall not include anything easily transportable by flow. Examples of acceptable materials include steel plates, untreated wooden planks, pre-cast concrete planks or blocks; examples of unacceptable materials include clay, silt, sand and gravel finer than cobble (roughly fist-sized). The armoring must, via mass, anchoring systems or a combination of the two, resist washout.
- 5.2.4.5. No vehicles or equipment shall ford any unarmored WUS crossing when flow is present.
- 5.2.4.6. Any ford, other than fords on native material, shall be designed, and maintained as necessary, to carry the proposed traffic without causing erosion or sedimentation of the stream channel while dry or during a flow event equal to or less than the design event for the crossing.
- 5.2.4.7. No unarmored ford shall be subject to heavy-truck or equipment traffic after a flow event until the streambed is dry enough to support the traffic without disturbing streambed material to a greater extent than in dry conditions. Light vehicles (less than 14,000 pounds gross weight) are not restricted by this condition.
- 5.2.4.8. Temporary structures constructed of imported materials are to be removed no later than upon completion of the permitted activity.
- 5.2.4.9. Temporary structures constructed of native materials, if they provide an obstacle to flow, or can contribute to or cause erosion, or cause changes in sediment load, are to be removed no later than upon completion of the permitted activity.

PROGRAMMATIC AGREEMENT

AMONG

**FEDERAL HIGHWAY ADMINISTRATION
ARIZONA STATE HISTORIC PRESERVATION OFFICE
ARIZONA DEPARTMENT OF TRANSPORTATION
MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
SALT RIVER PROJECT
BUREAU OF RECLAMATION
LUKE AIR FORCE BASE
ARIZONA STATE MUSEUM
CITY OF GLENDALE
CITY OF PEORIA
CITY OF EL MIRAGE
UNITED STATES ARMY CORPS OF ENGINEERS
FORT MCDOWELL YAVAPAI NATION
GILA RIVER INDIAN COMMUNITY
AK-CHIN INDIAN COMMUNITY
SALT RIVER PIMA-MARICOPA INDIAN COMMUNITY
HOPI TRIBE
YAVAPAI-APACHE NATION
SAN CARLOS APACHE NATION
TOHONO O'ODHAM NATION**

**REGARDING THE NORTHERN PARKWAY PROJECT [STATE ROUTE 303 TO US
HIGHWAY 60 (GRAND AVENUE)]
FEDERAL AID NO. STP-MMA-0(034)A
TRACS NO. 0000 MA MMA SS593 01C
MARICOPA COUNTY, ARIZONA**

WHEREAS, the City of Glendale, the City of Peoria, the City of El Mirage, and the Maricopa County Department of Transportation (MCDOT) (collectively referred to as the proponents) are planning the Northern Parkway Project (Project), a regional "super-street" (defined as a higher-speed, higher-capacity roadway with grade-separated intersections at major cross streets) that would extend approximately 12.5 miles between State Route (SR) 303 and US Highway 60 (Grand Avenue); and

WHEREAS, the area of potential effect (APE), for impacts that could potentially affect historic properties, is defined as including the parcels of property adjacent to the proposed alternative routes; and

WHEREAS, project construction will occur on lands under the jurisdiction of the City of Glendale, the City of Peoria, the City of El Mirage, and unincorporated Maricopa County; and

WHEREAS, the proposed project may have an adverse effect upon historic properties, which are defined as “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the National Register of Historic Places (NRHP), including artifacts, records, and material remains related to such property or resource” (National Historic Preservation Act [NHPA] 16 U.S.C. 470w, Title III, Section 301 [5]; and

WHEREAS, the Federal Highway Administration (FHWA) is providing technical and financial assistance for development of the Project, will assume lead responsibilities for compliance under Section 106 of the NHPA, and has consulted with, and will continue to consult with, the Arizona State Historic Preservation Office (SHPO) pursuant to 36 CFR Part 800 of the regulations implementing Section 106 of the NHPA (16 U.S.C. 470f) as revised in August 2004; and

WHEREAS, the Arizona Department of Transportation (ADOT), acting as agent for FHWA has participated in consultation and has been invited to be a signatory to this Programmatic Agreement (Agreement); and

WHEREAS, SHPO is authorized to enter this Agreement to fulfill the role of advising and assisting federal agencies in carrying out Section 101 and 106 responsibilities under 16 U.S.C. § 470a and 16 U.S.C. § 470f of the NHPA, pursuant to 36 CFR § 800.2(1); and

WHEREAS, the Advisory Council on Historic Preservation (Council) has been consulted pursuant to 36 CFR § 800.9, and has been invited to participate in this Agreement; and

WHEREAS, MCDOT, will have lead responsibility for final design and construction of the Project, and has been invited to participate in this Agreement; and

WHEREAS, the Project will be within rights-of-way held by the City of Glendale, the City of Peoria, and the City of El Mirage, they have been invited to participate in this Agreement; and

WHEREAS, a Clean Water Act Section 404 permit is required, the U.S. Army Corps of Engineers (USACE) has been invited to participate in this Agreement; and

WHEREAS, portions of the proposed parkway corridors cross undeveloped floodplains of New River and Agua Fria River, the Flood Control District of Maricopa County (FCDMC) has been invited to participate in this Agreement; and

WHEREAS, for testing and/or data recovery necessitated by the Project, the Arizona State Museum (ASM) has authority and responsibility for issuing permits and implementing the Arizona Antiquities Act (A.R.S. § 41-841 through § 41-847) on state lands (defined as land owned or controlled by state agencies and institutions, counties, and municipal corporations), and has been invited to participate in this Agreement; and

WHEREAS, Luke Air Force Base abuts approximately 2 miles of one of the proposed alternative alignment corridors, and has been invited to participate in this Agreement; and

WHEREAS, the Bureau of Reclamation and Salt River Project have been invited to participate in this Agreement to address potential impacts to canals within the proposed parkway corridors; and

WHEREAS, any testing and/or data recovery necessitated by the Project, that may be located on Federal land, must be permitted through an Archaeological Resources Protection Act (ARPA) permit and/or an Antiquities Act permit; and

WHEREAS, the FHWA has consulted with American Indian tribes that may attach religious or cultural importance to affected properties, including Fort McDowell Yavapai Nation, Gila River Indian Community, Ak-Chin Indian Community, Salt River Pima-Maricopa Indian Community, Hopi Tribe, Yavapai-Apache Nation, San Carlos Apache Nation, and Tohono O'odham Nation, hereafter referred to as the Tribes; and will be invited to participate in consultation [pursuant to 36 CFR § 800.2 (c)(2)(ii)(A-F)], and have been invited to be concurring parties in this Agreement; and

WHEREAS, by their signature all parties agree that the regulations specified in the ADOT document, "ADOT Standard Specifications for Road and Bridge Construction" (Section 104.12, 2000) will account for the cultural resources in potential material sources used in project construction; and

WHEREAS, an agreement regarding the treatment and disposition of Human Remains, Associated Funerary Objects, Sacred Objects and Objects of Cultural Patrimony would be developed for the Arizona State Museum (ASM) for state and private land, pursuant to A.R.S. § 41-844 and 41-865; and

WHEREAS, an agreement regarding the treatment and disposition of Graves and Human Skeletal Material would follow the Archaeological Resources Protection Act of 1979 (ARPA; Section 4.b.3 and 4.c) for federal land; and

WHEREAS, Human Remains, Associated/Unassociated Funerary Objects, Sacred Objects and Objects of Cultural Patrimony recovered will be treated in accordance with the Native American Graves and Protection Repatriation Act (NAGPRA) for federal land; and

NOW, THEREFORE, all parties agree that upon FHWA's decision to proceed with the Project, FHWA shall ensure that the following stipulations are implemented and take into account the effects of the Project on historic properties, and that these stipulations shall govern the Project and all of its parts until this Agreement expires or is terminated.

STIPULATIONS

The planning and development of the Project is being pursued in several phases-a) evaluation of alternative design concepts and routes, b) phased development of final designs (including geotechnical investigations) for different components of the Project, and c) phased construction of components of the Project estimated to occur between the years 2010 and 2030. The implementation of the following stipulations shall be coordinated with the phases of planning and construction.

FHWA will ensure that the following measures are carried out.

I. GEOTECHNICAL INVESTIGATIONS

As geotechnical investigation may adversely impact historic properties within the project's corridor, FHWA proposes that historic properties would be avoided by geotechnical investigations wherever possible. In the event that historic properties cannot be avoided, FHWA, in consultation with the consulting parties, shall determine appropriate treatment for the historic properties. Data recovery at geotechnical investigation locations requires a Work Plan, as described below, to be developed. Geotechnical investigations outside the boundaries of historic properties may proceed prior to the completion of any data recovery required at other locations.

II. INVENTORY, EVALUATION, AND EFFECT DETERMINATION

- A. FHWA, represented by ADOT, in consultation with all parties to this Agreement shall ensure that new inventory surveys of additional rights-of-way and temporary construction easements will include determinations of eligibility that are made in accordance with Section 106 for all historic properties, including any added staging or use areas. Should any party to this Agreement disagree with FHWA regarding eligibility, the SHPO shall be consulted and resolution sought within 20 calendar days. If FHWA and SHPO disagree on eligibility, FHWA shall request a formal determination from the Council.
- B. FHWA, represented by ADOT, will ensure that archaeological site areas needing testing, according to 36 CFR § 800.4(b)(2), will be investigated in a manner to evaluate them for eligibility for the NRHP. FHWA will develop a plan of work for Eligibility Testing (Testing Plan) for such areas, for submittal to all parties of the Agreement for review and comment prior to implementation of the Testing Plan. The review and comment of the Testing Plan will be consistent with the time frames specified in Stipulations III (A) and (B) below. The results of the testing will be detailed in an Archaeological Testing Report that will be reviewed and evaluated per Stipulations III (A) and (B) below.
- C. FHWA, represented by ADOT, has consulted with and will continue to consult with the Tribes, to help identify potential properties of religious and cultural significance within any additions to the APE, in any staging or use areas.
- D. FHWA, represented by ADOT, in consultation with SHPO, and other agencies with jurisdiction, shall apply the criteria of Adverse Effect in 36 CFR § 800.5 to all historic properties within the Project APE, including any area proposed for geotechnical testing or staging or use areas.
- E. If FHWA, SHPO, and agencies with jurisdiction over affected land agree (per Stipulations IV A and B) that a portion of the undertaking shall have no effect or no adverse effect on listed or eligible properties, FHWA may provide authorization to proceed with construction in that area, subject to obtaining any necessary permits and the conditions of any Monitoring or Discovery Plan developed for the Project, provided that construction does not preclude options for avoidance of historic properties in other segments.

III. DEVELOPMENT OF A DATA RECOVERY TREATMENT PLAN

- A. To the extent feasible, FHWA, as represented by ADOT, will avoid adverse effects to historic properties that are identified in the APE through project redesign or implementation of protective measures. Where avoidance is not feasible, FHWA, in consultation with SHPO, and other consulting parties, shall ensure that a data recovery treatment plan (Data Recovery Plan) is developed for the mitigation of anticipated effects on historic properties that will result from the Project and any related uses and activities.
- B. The Data Recovery Plan will be submitted by ADOT, on behalf of FHWA, to all parties of the Agreement for 30 calendar days' review. The Data Recovery Plan shall be consistent with the Secretary of the Interior's Standards and Guidelines for Archaeological Documentation (48 FR 44716-44742) and the Council's Recommended Approach for Consultation on Recovery of Significant Information from Archaeological Sites (64 FR 95:27085-27087). Unless any signatory or concurring party objects to the Data Recovery Plan within 30 calendar days after receipt of the plan, FHWA shall ensure that it is implemented prior to construction.
- C. The Data Recovery Plan shall minimally specify the following:
1. It will identify the historic properties to be affected by the Project as a whole and the nature of those effects. Identification and description of the traditional and/or religious significance of traditional cultural properties identified with Tribes may be done only with the permission of the appropriate Tribe(s).
 2. A Research Design will contain research questions and goals applicable to the Project area as a whole, which will be addressed through data recovery, along with an explanation of their relevance and importance. These research questions and goals shall reflect the concept of historic contexts as defined in National Register Bulletin 16, and shall take into consideration any such historic contexts established for the Project area.
 3. Field and analysis methods and strategies applicable to the Project area will be developed along with an explanation of their relevance to the research questions.
 4. The methods to be used in analysis, data management, and dissemination of data to the professional community and the public.
 5. A protocol for the treatment of human remains, in the event that such remains are discovered, describing methods and procedures for the recovery, inventory, treatment, and disposition of Human Remains, Associated Funerary Objects, and Objects of Cultural Patrimony. This protocol will reflect concerns and/or conditions identified as a result of consultation among parties to this agreement, and will be consistent with any Burial Agreement developed for this project.
 6. Monitoring procedures will be included to ensure that other potential historic properties are not affected by construction-related activities. These procedures shall specify the location of all identified properties and the means by which they

will be marked and avoided if construction or other ground-disturbing activities are allowed in nearby portions of the APE.

7. A Discovery Plan will be included to ensure adequate treatment of unanticipated discoveries taking into account the provisions of 36 CFR § 800.13 and A.R.S. § 41-844.
8. A proposed schedule for submission of progress, summary, and other reports to parties of this Agreement, as well as a proposed schedule for field work.

IV. COMMENTS ON TREATMENT PLANS FOR TESTING AND DATA RECOVERY

- A. Upon receipt of draft Treatment Plans acceptable to FHWA, as represented by ADOT, FHWA will then submit such drafts concurrently to all consulting parties to the Agreement for review. All parties will have 30 calendar days from receipt to review and provide comments to FHWA. Lack of comment within the review period may be taken as concurrence with the Treatment Plans.
- B. If revisions to the Treatment Plans are needed, all parties to this Agreement have 20 calendar days from receipt to review and comment on the revisions. If no comments are received within this period, FHWA may assume that the reviewer concurs with the revisions.
- C. Once the Treatment Plans have been determined adequate by all parties, FHWA shall issue authorization to proceed with the implementation, subject to obtaining all necessary permits.

V. REVIEW AND COMMENT ON PRELIMINARY REPORT OF FINDINGS

Such Preliminary Reports shall minimally contain the following:

1. Within two weeks following completion of fieldwork, the institution, firm, or consultant responsible for the work will prepare and submit a brief Preliminary Report of Findings that will demonstrate that the specifications of the consulted upon data recovery plan have been met.
2. Upon receipt of a draft of the Preliminary Report of Findings, FHWA, represented by ADOT, will review and subsequently submit such documents concurrently to all consulting parties for review. All consulting parties will have 30 calendar days from receipt to review and provide comments to ADOT. Lack of response within this review period will be taken as concurrence with the report.
3. If revisions to the Preliminary Report of Findings are made, all consulting parties have 20 calendar days from receipt to review the revisions and provide comments to ADOT. Lack of response within this review period will be taken as concurrence with the report.

4. Once the Preliminary Report of Findings has been accepted as a final document, FHWA, represented by ADOT, will notify appropriate project participants that construction may proceed.

VI. REVIEW AND COMMENT ON DATA RECOVERY REPORT

1. Within 180 days of completion of data recovery, a report will be prepared incorporating all appropriate data analyses and interpretations, and the report will be submitted to signatories and concurring parties who will be provided with 30 calendar days to review and comment upon the data report.
2. Upon receipt of the data recovery report, FHWA, represented by ADOT, will review and subsequently submit such documents concurrently to all remaining consulting parties for review. All consulting parties will have 30 calendar days from receipt to review and provide comments to ADOT. Lack of response within this review period will be taken as concurrence with the report.
3. If revisions to the data recovery report are made, all consulting parties will have 20 calendar days from receipt to review the revisions and provide comments to ADOT. Lack of response within this review period will be taken as concurrence with the report.
4. Once the data recovery report has been accepted as a final document, FHWA, represented by ADOT, will notify appropriate project participants that construction may proceed.

VII. DISCOVERIES

If potential historic or prehistoric archaeological materials or properties, or human remains are discovered after construction begins, the person in charge of the construction shall require construction to immediately cease with the area of the discovery, take steps to protect the discovery, and promptly report the discovery to the ADOT Historic Preservation Specialist, representing FHWA. The ADOT Historic Preservation Specialist, representing FHWA, shall notify and consult with appropriate agencies.

1. If the discovery, occurring on State or private land, appears to involve human remains or remains as defined in ASM rules implementing A.R.S. § 41-844 and 41-865, the Director of ASM shall be notified. In consultation with the Director, FHWA, represented by ADOT, and the person in charge of construction shall ensure that the discovery is treated according to the burial agreement.
2. If the discovery is located on Federal land and involves graves or human remains as defined in ARPA Section 3.1, the Federal Land Manager shall also be informed. In consultation with FHWA, represented by ADOT, the person in charge of construction shall immediately take steps to secure and maintain preservation of the discovery. FHWA, represented by ADOT, shall ensure that the discovery is treated according to the burial agreement.

3. If remains are not involved, and the discovery is located on state land, FHWA, represented by ADOT, shall notify ASM as required under A.R.S. § 41-844. ADOT, on behalf of FHWA in consultation with the Director and SHPO, if appropriate, shall determine if the Plan previously approved by ASM according to Stipulation II-B is appropriate to the nature of the discovery. If appropriate, the Plan shall be implemented by ADOT, on behalf of FHWA. If the Plan is not appropriate to the discovery, FHWA shall ensure that an alternate plan for the resolution of adverse effect is developed and circulated to the consulting parties, who will have two working days to review and comment upon the alternate plan. FHWA shall consider the resulting comments, and shall implement the alternate plan once a project specific permit has been issued.
4. If remains are not involved and the discovery is located on private land, FHWA, represented by ADOT, shall evaluate the discovery, and SHPO shall be notified as appropriate. The ADOT Historic Preservation Specialist, on behalf of FHWA, shall determine if the plan previously approved according to Stipulation II-B is appropriate to the nature of the discovery. If appropriate, the Plan shall be implemented by ADOT, on behalf of FHWA. If the Plan is not appropriate to the discovery, FHWA shall ensure that an alternate plan for the resolution of adverse effect is developed and circulated to the consulting parties, who will have two working days to review and comment upon the alternate plan. FHWA shall consider the resulting comments, and shall implement the alternate plan once a project specific permit has been issued.
5. If the discovery is located on federal land, FHWA, represented by ADOT, shall determine if the discovery classifies as an "archaeological resource" as defined in Section 3.1 of ARPA, or determine if the discovery classifies as an historical resource or resource with tribal significance, and the Federal Land Manager must then be contacted.

VIII. CHANGES IN CONSTRUCTION CORRIDORS AND ANCILLARY AREAS

Any changes or additions in construction corridors, staging areas, or use areas will be handled in a manner consistent with Stipulations I-IV.

IX. STANDARDS FOR MONITORING AND DATA RECOVERY

All historic preservation work carried out pursuant to this Agreement shall be carried out by, or under the supervision of, a person, or persons, meeting at a minimum the Secretary of the Interior's Professional Qualifications Standards (48 FR 44738-44739).

X. CURATION

All materials and records resulting from the data recovery program conducted within the Project area shall be curated in accordance with either ASM or ARPA.

1. For materials and records located on state or private land, curation shall take place in accordance with standards outlined in A.R.S. § 41-844, and guidelines generated by ASM. The repository for materials either will be ASM or one

located in Maricopa County that meets those standards and guidelines. Materials subject to repatriation under A.R.S. § 41-844 and A.R.S. § 41-865 shall be maintained in accordance with the burial agreement.

2. Archaeological Resources excavated or removed from federal land will be preserved by a suitable university, museum, or other scientific or educational institution (ARPA, Section 4.b.3). Resources having religious or cultural importance shall be maintained in accordance with the burial agreement until any specified analyses, as determined following the consultation with the appropriate Indian tribes and individuals, are complete and the resources are returned.

XI. DISPUTE RESOLUTION

Should any signatory or concurring party to this Agreement object within 30 days to any plan or report provided for review or to any aspect of this undertaking related to historic preservation issues, FHWA shall consult with the objecting party to resolve the objection. If the objection cannot be resolved, FHWA shall request further comments from the SHPO with reference only to the subject of the dispute; FHWA's responsibility to carry out all actions under this Agreement that are not the subject of the dispute will remain unchanged.

XII. CONFIDENTIALITY

The distribution of sensitive information about the locations and nature of inventoried historic properties shall be limited as provided for by Section 304 of the NHPA, Section 9(a) of ARPA, and ARS § 39-125. Pursuant to this stipulation, the participants to this Agreement agree to appropriately control the distribution of any confidential information they may receive as a result of their participation in this Agreement.

XIII. AMENDMENT

This Agreement may be amended by the signatories pursuant to 36 CFR § 800.6 (c)(7). FHWA shall file any amendments with the Council and provide notice to the parties.

XIV. TERMINATION

This Agreement shall be null and void if its terms are not carried out within 10 years from the date of initial project design plans, unless the consulting parties agree in writing to an extension for carrying out its terms. Any consulting party may terminate this Agreement by providing written notice within 30 calendar days to the other parties, provided that the parties will consult during that period to seek agreement on amendments or other actions that would avoid termination. In the event of termination or expiration, FHWA, represented by ADOT, shall either execute a new Agreement under 36 CFR § 800.7(a).

XV. FAILURE TO CARRY OUT THE TERMS OF THE AGREEMENT

In the event that the terms of this Agreement are not accomplished, federal agencies shall comply with 36 CFR § 800.3 through § 800.6 with regard to individual actions covered by this Agreement.

Execution and implementation of this Agreement is evidence that FHWA, represented by ADOT, has afforded the Council an opportunity to comment on the Northern Avenue Parkway project extending 12.5 miles from SR 303 to US Highway 60 (Grand Avenue) in Maricopa County, and its effect on historic properties. In so doing, FHWA, and SHPO have therefore satisfied the Section 106 responsibilities for all individual actions of this undertaking and have taken into account the effects of the undertaking on historic properties. Participation in this Agreement also satisfies the State Historic Preservation Act responsibilities of ADOT for this undertaking pursuant to A.R.S. § 41-864.

SIGNATORIES

FEDERAL HIGHWAY ADMINISTRATION

By Mary E. Fry

Date 12-12-2008

Title Environmental Coordinator

ARIZONA STATE HISTORIC PRESERVATION OFFICER

By James Garrison

Date 12/23/08

Title ASHPO

INVITED SIGNATORIES

ARIZONA DEPARTMENT OF TRANSPORTATION

By Shirley Anderson

Date 12-11-08

Title Manager

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION

By _____

Date _____

Title _____

CONCURRING PARTIES

ARIZONA STATE MUSEUM

By *Bob Grinnell*

Date *Dec 23, 2008*

Title _____

CITY OF GLENDALE

By _____

Date _____

Title _____

CITY OF PEORIA

By _____

Date _____

Title _____

CITY OF EL MIRAGE

By _____

Date _____

Title _____

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

By _____

Date _____

Title _____

LUKE AIR FORCE BASE

By _____

Date _____

Title _____

U.S. ARMY CORPS OF ENGINEERS

By _____

Date _____

CONCURRING PARTIES

ARIZONA STATE MUSEUM

By _____

Date _____

Title _____

CITY OF GLENDALE

By _____

Date _____

Title _____

CITY OF PEORIA

By _____

Date _____

Title _____

CITY OF EL MIRAGE

By _____

Date _____

Title _____

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

By _____

Date _____

Title _____

LUKE AIR FORCE BASE

By _____

Date _____

Title _____

U.S. ARMY CORPS OF ENGINEERS

By Mark Durham

Date 22 Dec 2007

Title _____
SALT RIVER PROJECT

By _____

Date _____

Title _____

BUREAU OF RECLAMATION

By _____

Date _____

Title _____

FORT MCDOWELL YAVAPAI NATION

By Dr. Myron M. Patton

Date 1-12-09

Title President

GILA RIVER INDIAN COMMUNITY

By _____

Date _____

Title _____

AK-CHIN INDIAN COMMUNITY

By _____

Date _____

Title _____

SALT RIVER PIMA-MARICOPA INDIAN COMMUNITY

By _____

Date _____

Title _____

HOPI TRIBE

By _____

Date _____

Title _____

YAVAPAI-APACHE NATION

By _____

Date _____

Title _____

SAN CARLOS APACHE NATION

By _____

Date _____

Title _____

TOHONO O'ODHAM NATION

By _____

Date _____

Title _____



Existing Improvements

New Right of Way (Survey Area)

NORTHERN AVENUE

APPROX 135TH AVENUE

New Right of Way (Survey Area)

— Survey Area
— Design Files

TT347
 STP-MMA-0(239)F
 NORTHERN PARKWAY - DYSART ROAD TO 111TH AVENUE
 MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
 PLAN VIEW

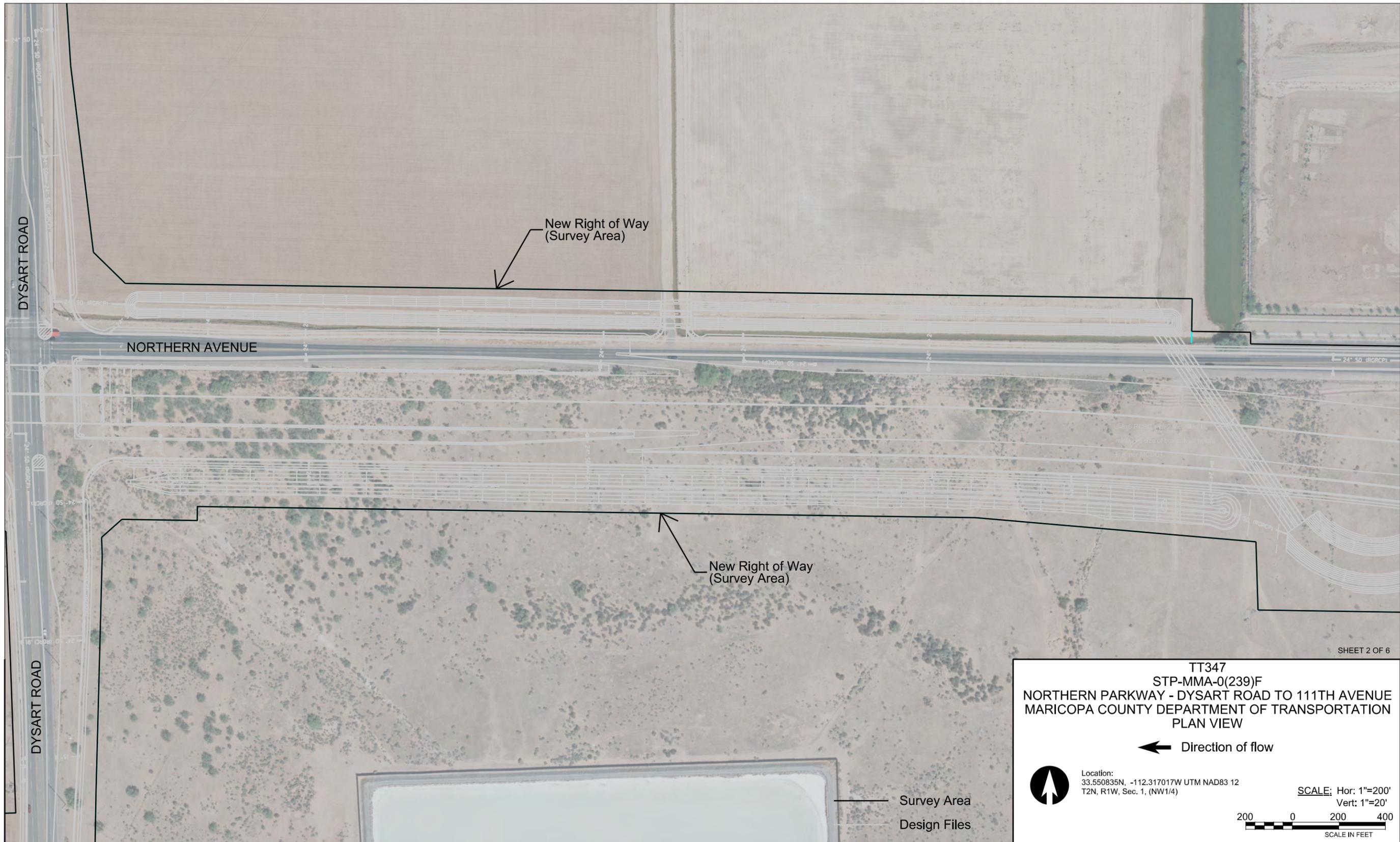
← Direction of flow

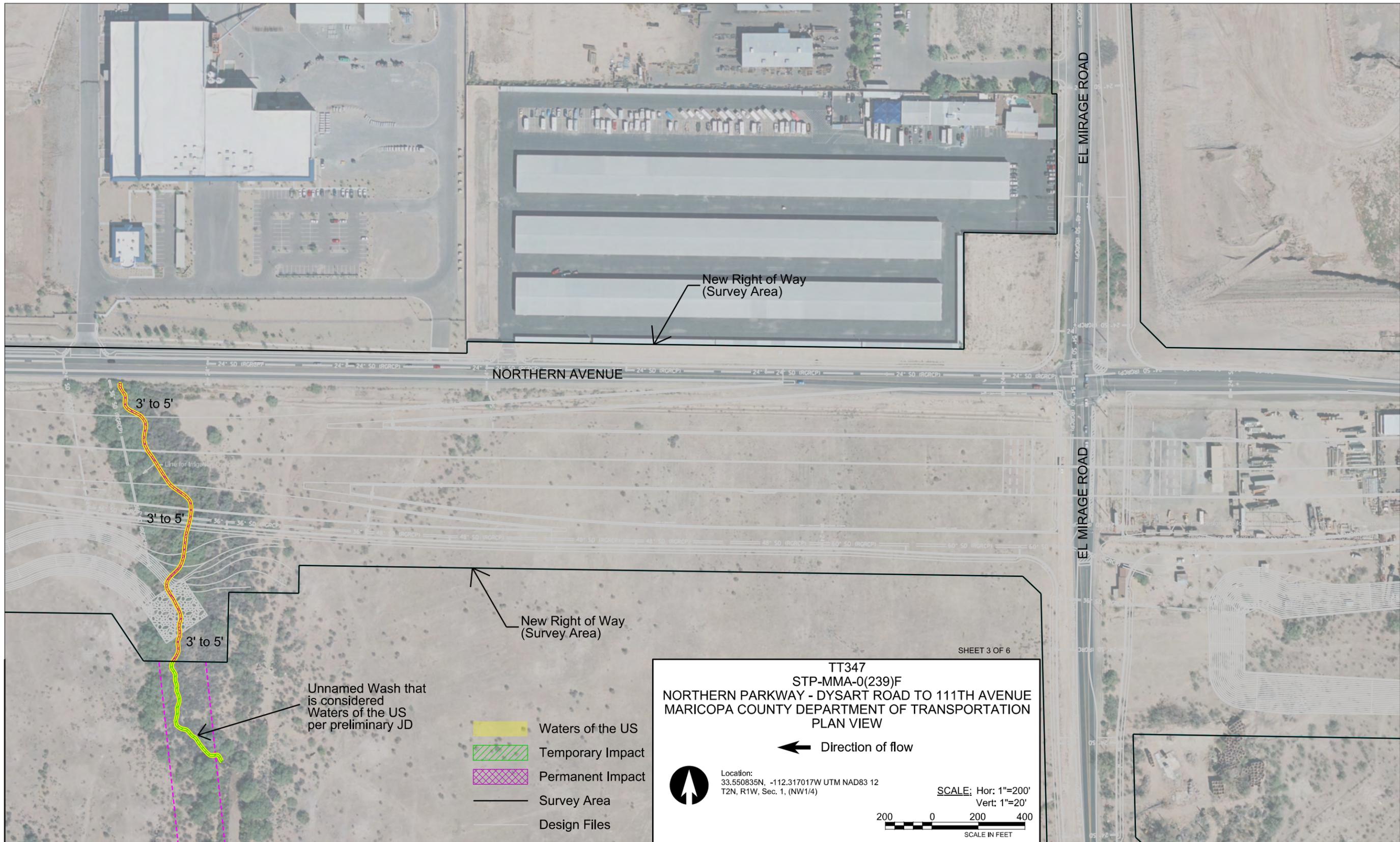
Location:
 33.550835N, -112.317017W UTM NAD83 12
 T2N, R1W, Sec. 1, (NW1/4)

SCALE: Hor: 1"=200'
 Vert: 1"=20'

200 0 200 400
 SCALE IN FEET

SHEET 1 OF 6





New Right of Way
(Survey Area)

NORTHERN AVENUE

EL MIRAGE ROAD

EL MIRAGE ROAD

3' to 5'

3' to 5'

3' to 5'

New Right of Way
(Survey Area)

Unnamed Wash that
is considered
Waters of the US
per preliminary JD

- Waters of the US
- Temporary Impact
- Permanent Impact
- Survey Area
- Design Files

TT347
STP-MMA-0(239)F
NORTHERN PARKWAY - DYSART ROAD TO 111TH AVENUE
MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
PLAN VIEW

← Direction of flow

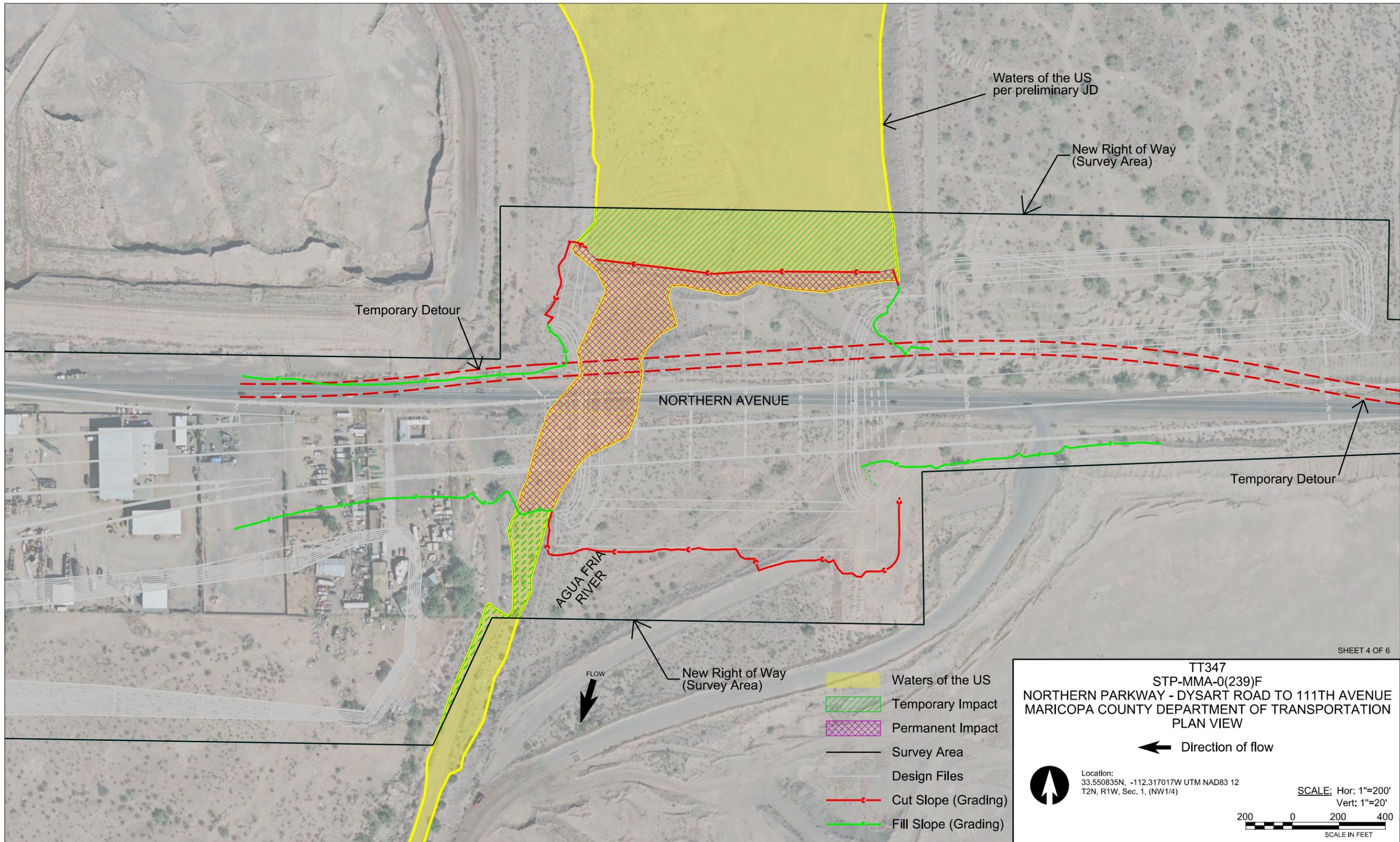


Location:
33.550835N, -112.317017W UTM NAD83 12
T2N, R1W, Sec. 1, (NW1/4)

SCALE: Hor: 1"=200'
Vert: 1"=20'



SHEET 3 OF 6



Waters of the US
per preliminary JD

New Right of Way
(Survey Area)

Temporary Detour

NORTHERN AVENUE

Temporary Detour

AGUA FRIA
RIVER

FLOW

New Right of Way
(Survey Area)

- Waters of the US
- Temporary Impact
- Permanent Impact
- Survey Area
- Design Files
- Cut Slope (Grading)
- Fill Slope (Grading)

SHEET 4 OF 6

TT347
STP-MMA-0(239)F
NORTHERN PARKWAY - DYSART ROAD TO 111TH AVENUE
MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
PLAN VIEW

← Direction of flow

Location:
33.550835N, -112.317017W UTM NAD83 12
T2N, R1W, Sec. 1, (NW1/4)

SCALE: Hor: 1"=200'
Vert: 1"=20'

SCALE IN FEET



New Right of Way
(Survey Area)

NORTHERN AVENUE

Temporary Detour

New Right of Way
(Survey Area)

Survey Area

Design Files

SHEET 5 OF 6

TT347
STP-MMA-0(239)F
NORTHERN PARKWAY - DYSART ROAD TO 111TH AVENUE
MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
PLAN VIEW

← Direction of flow

Location:
33.550835N, -112.317017W UTM NAD83 12
T2N, R1W, Sec. 1, (NW1/4)

SCALE: Hor: 1"=200'
Vert: 1"=20'

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SCALE IN FEET



New Right of Way
(Survey Area)

New Right of Way
(Survey Area)

112TH AVENUE

111TH AVENUE

110TH AVENUE

109TH AVENUE

NORTHERN AVENUE

110TH AVENUE

109TH AVENUE

Survey Area
Design Files

TT347
STP-MMA-0(239)F
NORTHERN PARKWAY - DYSART ROAD TO 111TH AVENUE
MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION
PLAN VIEW

← Direction of flow



Location:
33.550835N, -112.317017W UTM NAD83 12
T2N, R1W, Sec. 1, (NW1/4)

SCALE: Hor: 1"=200'
Vert: 1"=20'



SCALE IN FEET

SHEET 6 OF 6