F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
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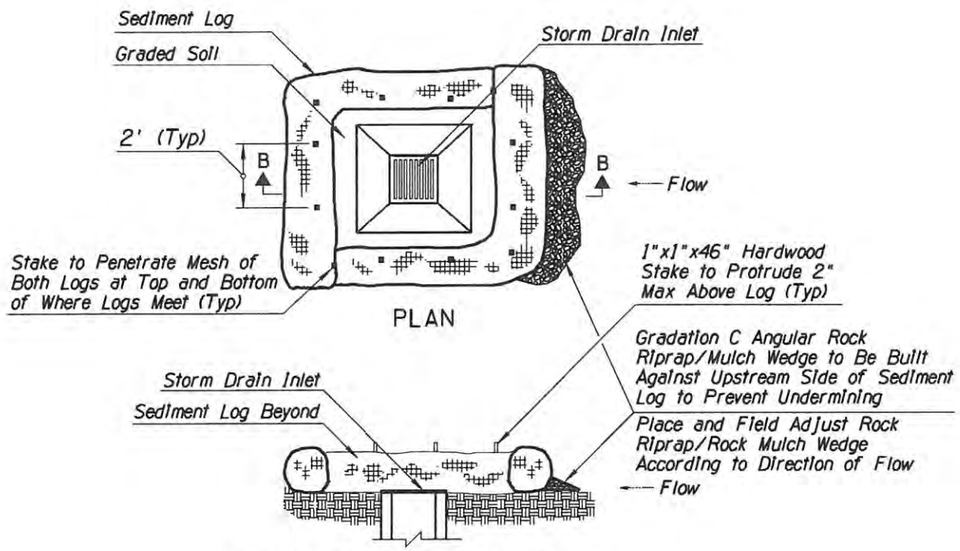
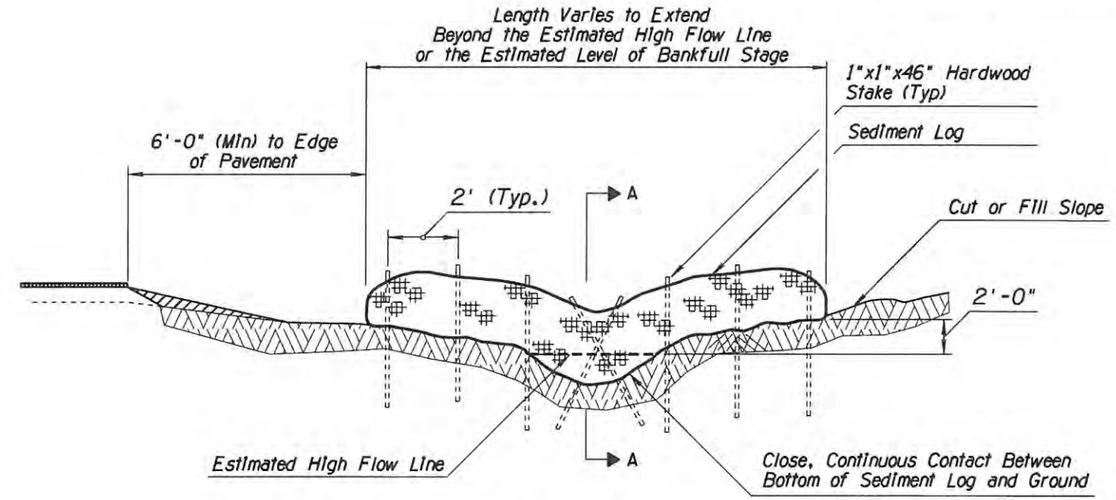
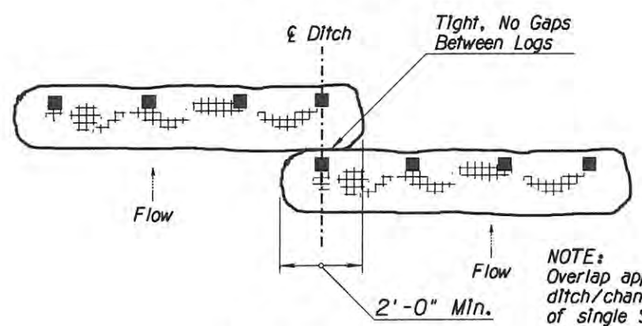


SEDIMENT LOG AT STORM DRAIN
SECTION B-B (NTS)

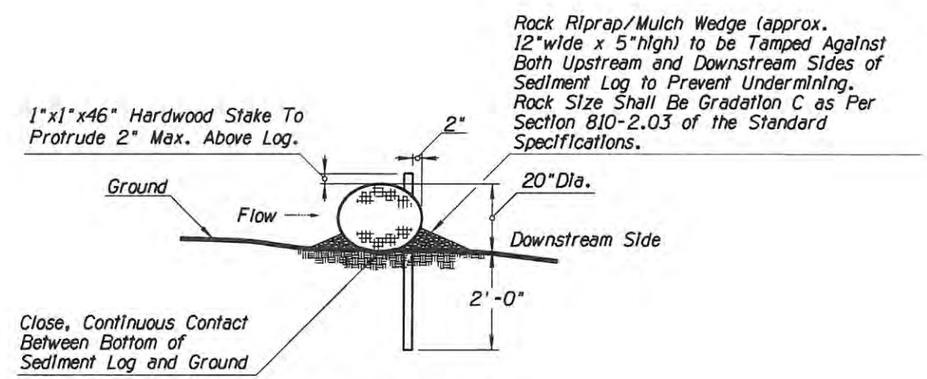


SEDIMENT LOG IN DITCH/CHANNEL
SECTIONAL ELEVATION (NTS)



NOTE:
Overlap applies to situations where ditch/channel is wider than length of single Sediment Log. Two or multiple Sediment Logs may be necessary.

TYPICAL OVERLAP
PLAN (NTS)



SECTION A-A (NTS)

NOTES:
1. Sediment Logs shall not be installed in the urban freeway medians, nor where cable barrier systems are employed.
2. Locate Sediment Logs as indicated in plans, SWPPP or as directed by the Engineer.
3. Select, install and maintain Logs per manufacturers' specifications and good engineering practices.
4. Lay sediment log across prepared ditch or channel. Trenching or burial of Sediment Logs is not required. The close, continuous contact between the bottom of the Log and the ground is mandatory. The Logs shall be installed in the ditch, swale or channel bottom perpendicular to the flow of water as shown on detail this sheet.
5. Stake Log as shown. Stakes shall be placed through downstream side only as shown.
6. DO NOT drive stakes through center of the log. Stakes must be driven into the ground as shown.
7. Ensure that no gaps exist between soil and bottom of Sediment Log. Repair any rills or undercuts promptly.
8. Placement of Sediment Logs shall be evaluated by the Engineer in rocky soil conditions.
9. Remove Sediment Log BMPs within the ditches/channels and around the storm drain inlets as per the Direction of the Engineer or as soon as practicable upon stabilization of the construction disturbed area.
10. Dispose of Sediment Logs and trapped sediment material and fill trench created by Sediment Log.
11. The installation and maintenance of Sediment Log BMPs shall not negatively impact traffic safety, nor the designed function of roadway or bridge drainage facilities. Sediment Logs shall be installed and maintained to carry the stormwater of at least 2-year, 24-hour events.
12. Field adjust and correct Sediment Log BMP immediately if it is causing flooding, erosion, and/or affecting roadway safety.
13. Install rock mulch/riprap for channel/ditch lining or rock check dams for longitudinal ditch slopes that exceed 5% and/or for soil conditions not suitable for log installation.
14. The Sediment Log BMP's pay/bid item shall include all materials used for this BMP: all ground preparation, furnishing, installing, maintenance, final removal, and disposal, as well as returning the area to an acceptable condition as approved by the Engineer.
15. Refer to Standard Specification Section 810-2.06(B) for Sediment Log material specifications.

DETAIL ES1
SEDIMENT LOG

	NAME	DATE
DESIGN	TAO ZI FONG	5-2011
DESIGN	HAN MENG	5-2011
DRAWN	TAO ZI FONG	5-2011
DRAWN	HAN MENG	5-2011
CHECKED	E LEROY BRADY	5-2011
TEAM LEADER	E LEROY BRADY	5-2011
ROUTE	MP	LOCATION

ARIZONA DEPARTMENT OF TRANSPORTATION
INTERMODAL TRANSPORTATION DIVISION
ROADSIDE DEVELOPMENT SECTION

STORMWATER QUALITY PROTECTION & EROSION/SEDIMENT CONTROL DETAILS

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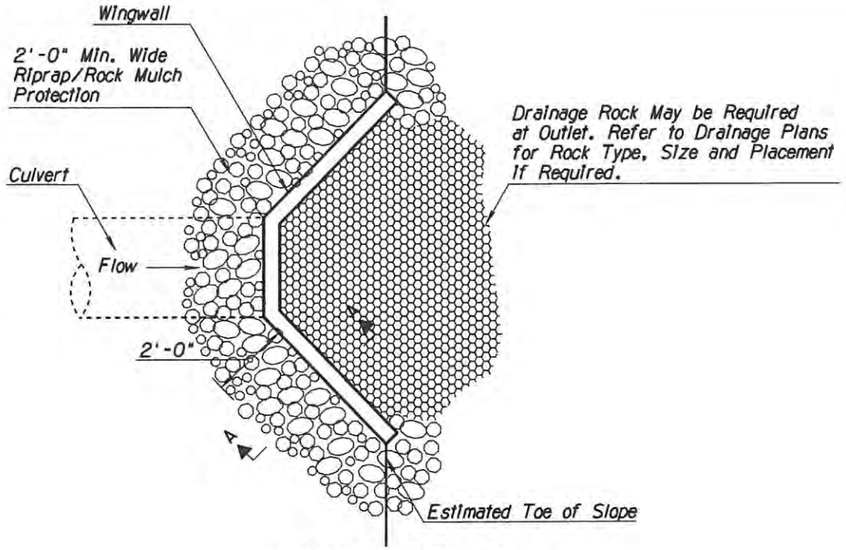
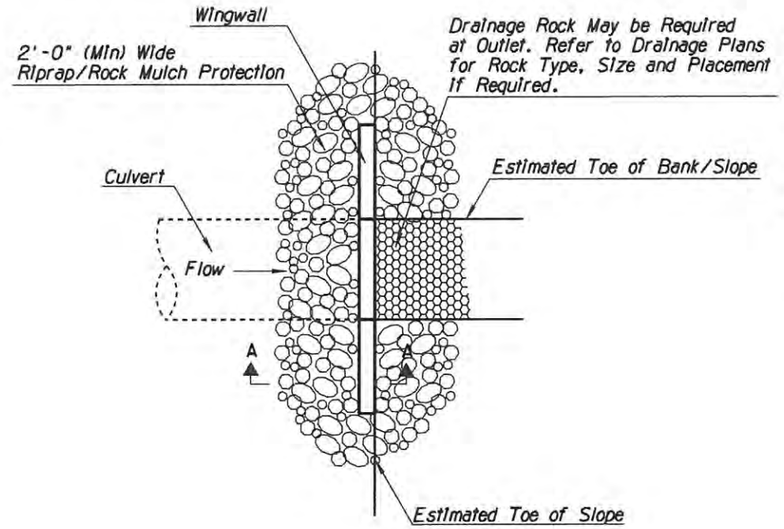
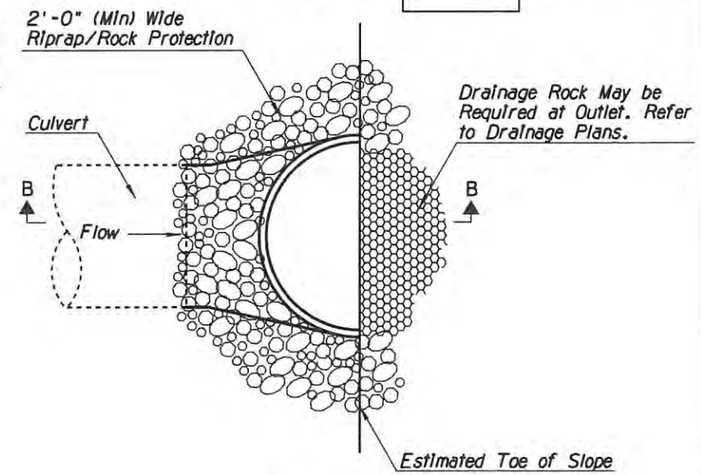


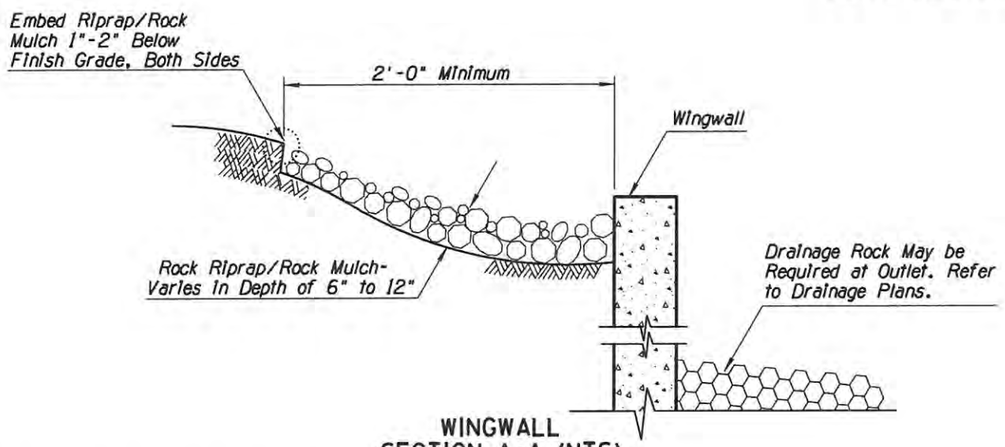
ANGLED HEADWALL
PLAN VIEW (NTS)



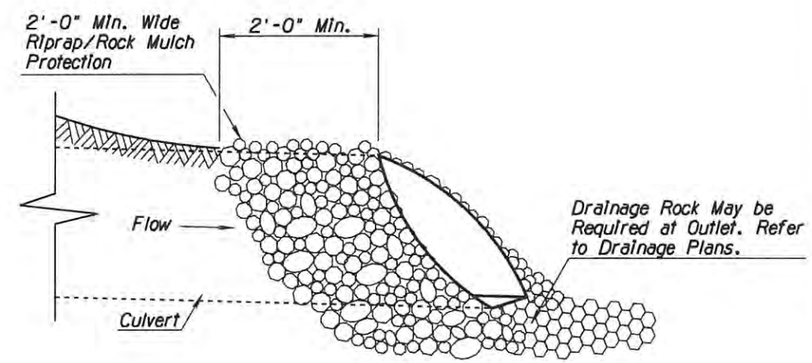
FLUSH HEADWALL
PLAN VIEW (NTS)



FLARED END
PLAN VIEW (NTS)



WINGWALL
SECTION A-A (NTS)



FLARED END
SECTION B-B (NTS)

NOTES:
1. Rock Riprap/Rock Much shall be angular shaped, crushed rock materials.
2. Rock Riprap/Rock Mulch within the traffic Clear Zone shall conform to the requirements of Section 810-2.03 Sieve Size Gradation A and/or Gradation C, and Section 913 of the Standard Specifications.
3. Imbed rock within traffic recovery area/clear zone into the finished grade so that any portion of the rock above the grade will be less than 4" in height.
4. The installation and maintenance of Rock Protection BMPs shall not negatively impact traffic safety, nor the designed function of roadway or bridge drainage facilities. Rock Protection BMPs shall be installed and maintained to carry the stormwater of at least 2-year, 24-hour events.
5. Field adjust and correct Rock Protection BMP immediately if it is causing flooding, erosion, and/or affecting roadway safety.
6. The Rock Protection BMP's pay/bid item shall include all materials used for this BMP: all ground preparation, furnishing, installing, maintaining as well as returning the area to an acceptable condition as approved by the Engineer.

DETAIL ES2

ROCK PROTECTION FOR INLETS, OUTLETS AND HEADWALL TRANSITION

	NAME	DATE
DESIGN	TAO ZI FONG	5-2011
DESIGN	HAN MENG	5-2011
DRAWN	TAO ZI FONG	5-2011
DRAWN	HAN MENG	5-2011
CHECKED	E LEROY BRADY	5-2011
TEAM LEADER	E LEROY BRADY	5-2011
ROUTE	MP	LOCATION

ARIZONA DEPARTMENT OF TRANSPORTATION
INTERMODAL TRANSPORTATION DIVISION
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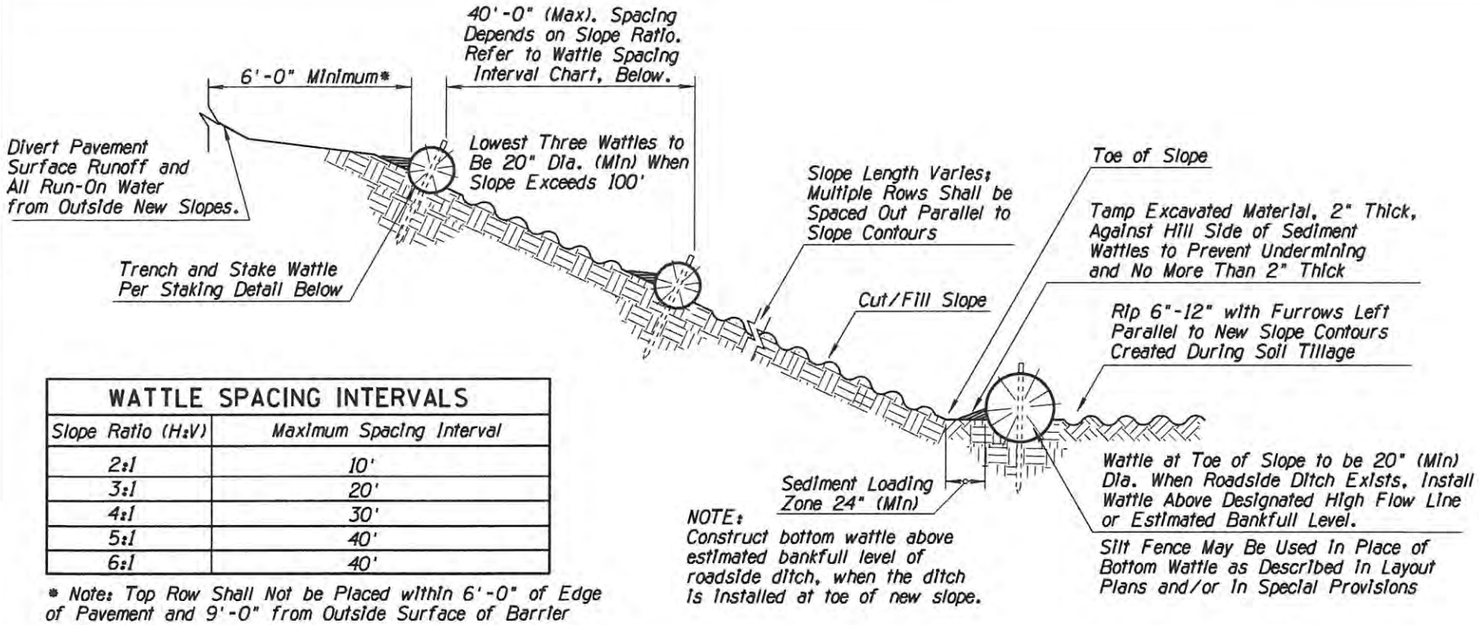
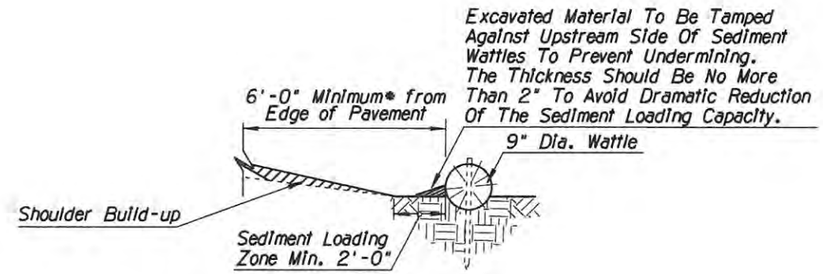


NOTE:
Construct bottom wattle above estimated bankfull level of roadside ditch, when the ditch is installed at toe of new slope.

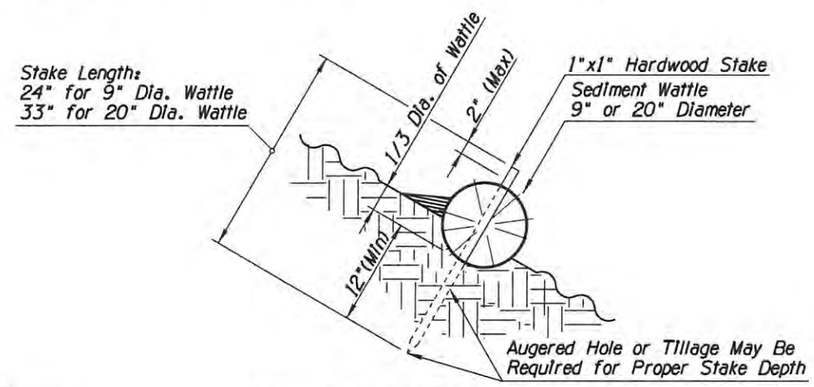
WATTLE SPACING INTERVALS	
Slope Ratio (H:V)	Maximum Spacing Interval
2:1	10'
3:1	20'
4:1	30'
5:1	40'
6:1	40'

* Note: Top Row Shall Not be Placed within 6'-0" of Edge of Pavement and 9'-0" from Outside Surface of Barrier

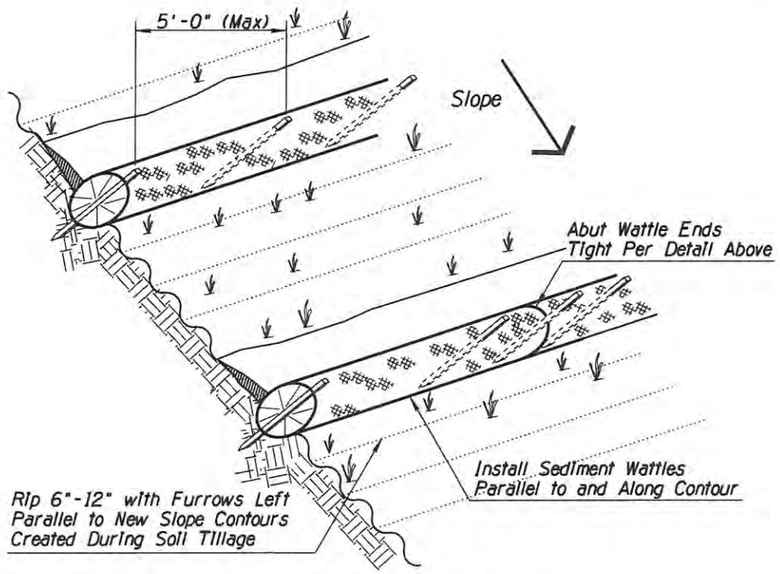
SECTION (NTS)



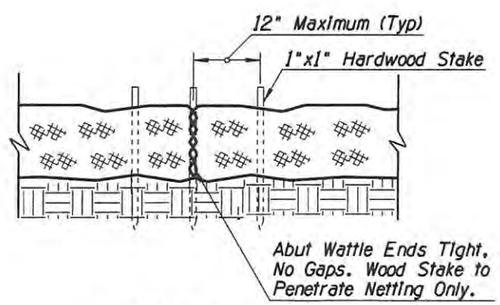
NEW SHOULDER BUILDUP PROTECTION SECTION (NTS)



SEDIMENT WATTLE STAKING DETAIL (NTS)



SEDIMENT WATTLE LAYOUT (NTS)



SEDIMENT WATTLE OVERLAP (NTS)

NOTES:

1. Install Sediment Wattles as slopes are constructed to grade or as directed by the Engineer. Select, install and maintain in conformance with manufacturers' specifications to meet site conditions for slope protection and in accordance with good engineering practices. No Sediment Wattles shall be installed in urban freeway medians, nor where cable barrier systems are employed.
2. Sediment Wattles shall be in continuous contact with trench bottom and sides. Do not overlap wattle ends on top of each other. A 20" Dia. wattle may be made from 2-3 rolled excelsior or straw blankets.
3. Butt adjoining wattles tightly against each other. Drive the first end stake of the second wattle at an angle toward the first wattle to help abut them tightly.
4. Repair any rills or gullies promptly. Field adjust and correct Wattle BMP immediately if it is causing flooding, erosion, and/or affecting roadway safety.
5. Construction of cut slopes 2:1 and steeper in soil and rock materials that can be ripped shall be constructed, whenever possible, by Minibenching. Refer to Slope Minibenching Detail.
6. Loosening surface soil is not required where Minibenches are used. For seeded areas, tillage shall be performed to form minor ridges and furrows parallel to new slope contours and as specified in Section 805 of the Standard Specifications.
7. Divert and direct run-on water from outside of the slopes to the spillways and/or rock riprap/rock mulch. Diversion dikes and/or ditches are necessary on natural undisturbed slopes beyond the top limits of new slopes to divert run-on water.
8. Installation and maintenance of Sediment Wattle BMPs shall not negatively impact traffic safety, nor the designed function of roadway or bridge drainage facilities.
9. Install and maintain Sediment Wattle BMPs to carry the stormwater of at least 2-year, 24-hour events.
10. The Sediment Wattle BMP's pay/bid item shall include all materials used for this BMP: all ground preparation, furnishing, installing, maintenance, final removal, and disposal of this temporary BMP, as well as returning the area to an acceptable condition as approved by the Engineer.
11. Refer to Standard Specification Section 810-2.06(C) for Sediment Wattle material specifications.

DETAIL ES3
SEDIMENT WATTLE

	NAME	DATE
DESIGN	TAO ZI FONG	5-2011
DESIGN	HAN MENG	5-2011
DRAWN	TAO ZI FONG	5-2011
DRAWN	HAN MENG	5-2011
CHECKED	E LEROY BRADY	5-2011
TEAM LEADER	E LEROY BRADY	5-2011
ROUTE	MP	LOCATION

ARIZONA DEPARTMENT OF TRANSPORTATION
INTERMODAL TRANSPORTATION DIVISION
ROADSIDE DEVELOPMENT SECTION

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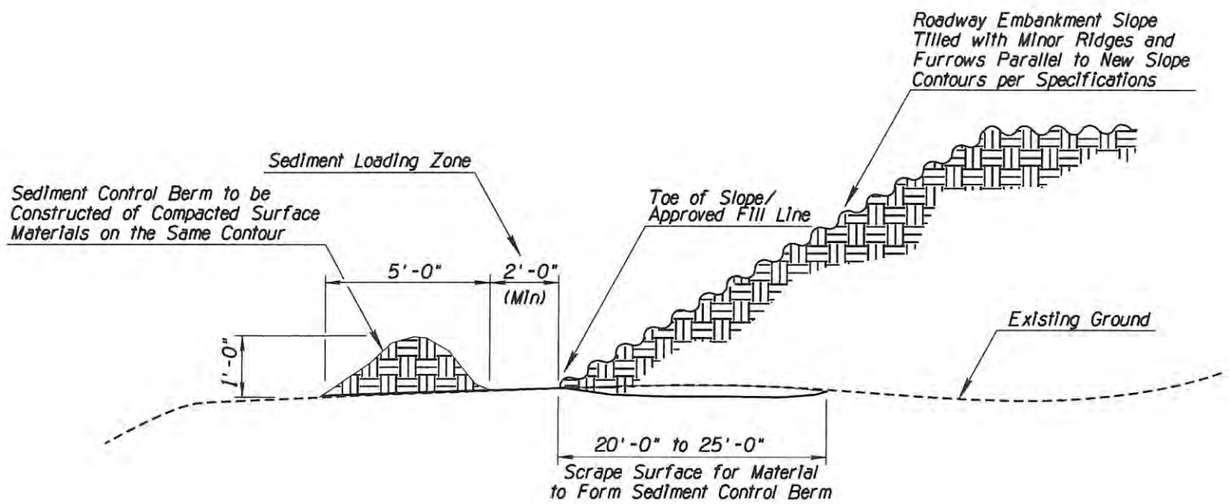

SEDIMENT CONTROL BERM
SECTION (NTS)

NOTES:

1. Locate Sediment Control Berms as indicated on plans or as directed by the Engineer.
2. Surface materials i.e. soil, rock, branches, leaves, slash and chips shall be scraped from the existing grade as needed to construct the berm prior to placement of roadway embankment. After scraping material into berm, compact berm as shown. Rock and slash shall extend no more than 4" above the surface.
3. Construct Sediment Control Berm on the same contour as the toe of new slope and a miniumum of 2'-0" beyond the toe of new slope. For the seeded areas, till to form minor ridges and furrows parallel to new slope contours and as specified in Section 805 of the Standard Specifications.
4. The installation and maintenance of Sediment Control Berm BMPs shall not negatively impact traffic safety, nor the designed function of roadway or bridge drainage facilities. For erosion/sediment control purposes, Sediment Control Berm BMPs shall be installed and maintained to carry the stormwater of at least 2-year, 24-hour events.
5. Remove Sediment Control Berms per the direction of the Engineer or as soon as practicable upon stabilization of the construction disturbed area.
6. Field adjust and correct Sediment Control Berm BMP immediately if it is causing flooding, erosion, and/or affecting roadway safety.
7. Sediment Control Berms may be paid as a part of slope construction/ roadway excavation. When paid separately, the Sediment Control Berm BMP's pay/bid item shall include all materials used for this BMP; all ground preparation, furnishing, installing, final removal, and disposal of this temporary BMP, as well as returning the area to an acceptable condition as approved by the Engineer.
8. OPTION TO SEDIMENT CONTROL BERM: When shown on layout plans and/or called for in Special Provisions, for urban situations, or where surface materials are not available, use wattles. Wattles shall be selected, installed, and maintained in accordance with manufacturers' specifications and good engineering practices. Refer to Sediment Wattle BMP.

DETAIL ES5
SEDIMENT CONTROL BERM

	NAME	DATE
DESIGN	TAO ZI FONG	05-2011
DESIGN	HAN MENG	05-2011
DRAWN	TAO ZI FONG	05-2011
DRAWN	HAN MENG	05-2011
CHECKED	E LEROY BRADY	05-2011
TEAM LEADER	E LEROY BRADY	05-2011
ROUTE	MP	LOCATION

ARIZONA DEPARTMENT OF TRANSPORTATION
INTERMODAL TRANSPORTATION DIVISION
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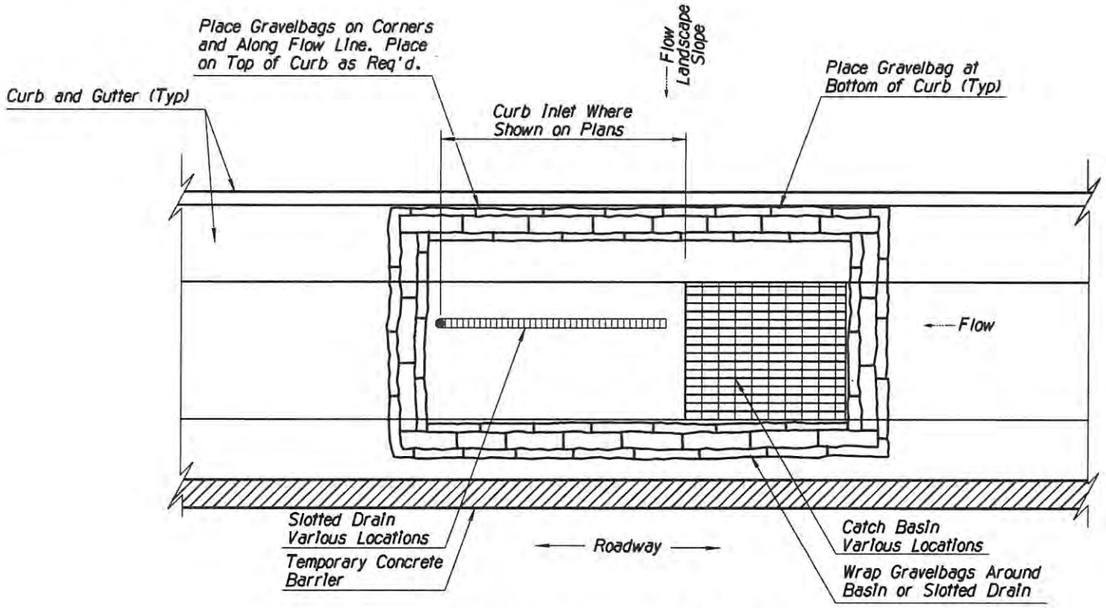
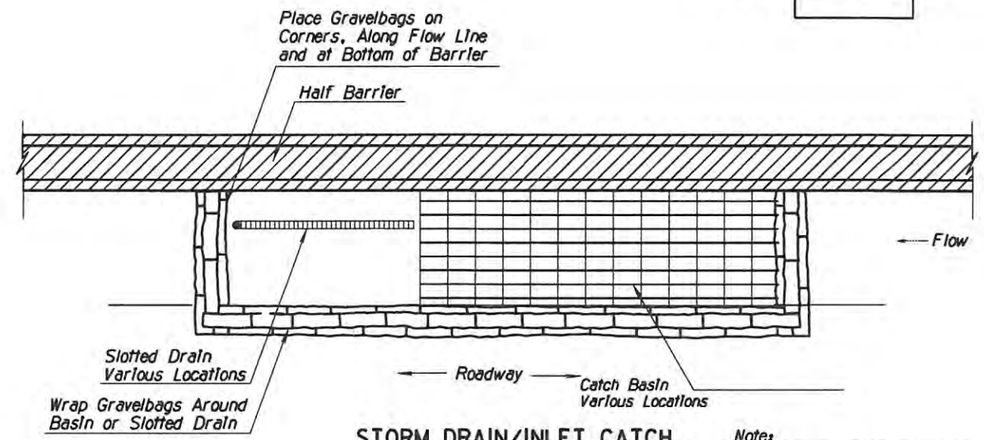
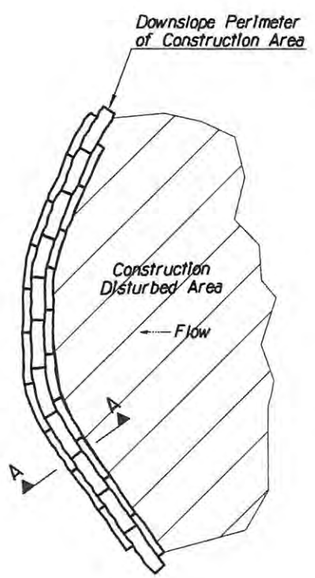


STORM DRAIN/INLET CATCH BASIN AT CURB PLAN VIEW (NTS)



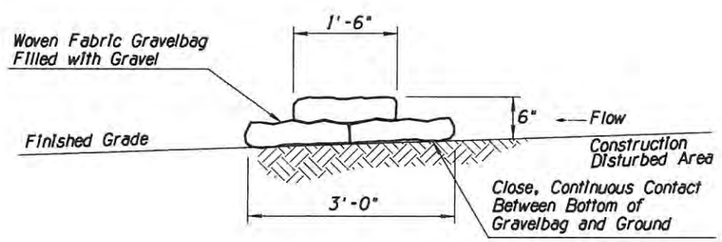
STORM DRAIN/INLET CATCH BASIN AT HALF BARRIER PLAN VIEW (NTS)

Note:
Apply Under Traffic Control.



Note:
Apply Under Traffic Control or Outside of ClearZone/Recovery Area

GRAVELBAG SEDIMENT TRAP PLAN VIEW (NTS)



SECTION A-A (NTS)

NOTES:

1. Gravelbag material shall be from polypropylene, polyethylene, or polyamide woven fabric. Refer to Special Provisions for Mullen burst strength and ultraviolet stability requirements.
2. When sediment depth reaches 3 inches, remove and properly dispose of accumulated material.
3. Do not apply Gravelbag BMP in the area of open traffic.
4. When applied as a perimeter control BMP, Gravelbags shall be used for surface areas where wattles and silt fences are not suitable.
5. Do not install Gravelbags as multiple ditch check dams.
6. The installation and maintenance of Gravelbag BMPs shall not negatively impact traffic safety, nor the designed function of roadway or bridge drainage facilities. Gravelbag BMPs shall be installed and maintained to carry the stormwater of at least 2-year, 24-hour events.
7. Gravelbags are designed for temporary water quality protection only. Remove Gravelbags per the Direction of the Engineer or as soon as practicable upon stabilization of the construction disturbed area.
8. Field adjust and correct Gravelbag BMP immediately if it is causing flooding, erosion, and/or affecting roadway safety.
9. Refer to Special Provisions for gradation of gravel material.
10. The Gravelbag BMP's pay/bid item shall include all materials used for this BMP: all ground preparation, furnishing, installing, maintenance, final removal, and disposal, as well as returning the area to an acceptable condition as approved by the Engineer.

DETAIL ES8

GRAVELBAG PROTECTION

	NAME	DATE
DESIGN	TAO ZI FONG	05-2011
DESIGN	HAN MENG	05-2011
DRAWN	TAO ZI FONG	05-2011
DRAWN	HAN MENG	05-2011
CHECKED	E LEROY BRADY	05-2011
TEAM LEADER	E LEROY BRADY	05-2011
ROUTE	MP	LOCATION

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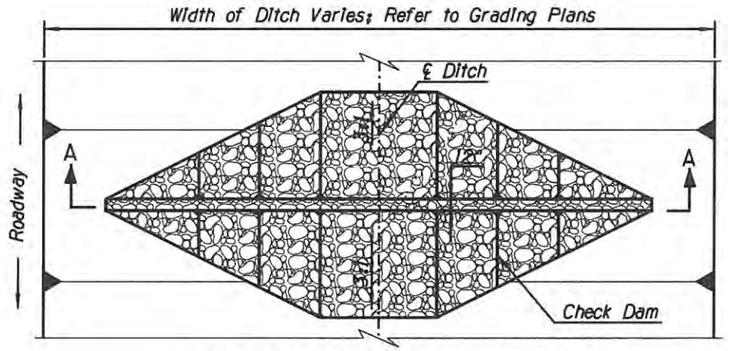
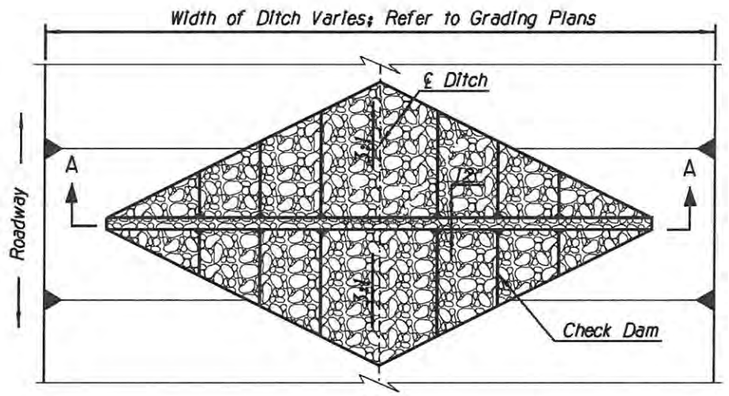
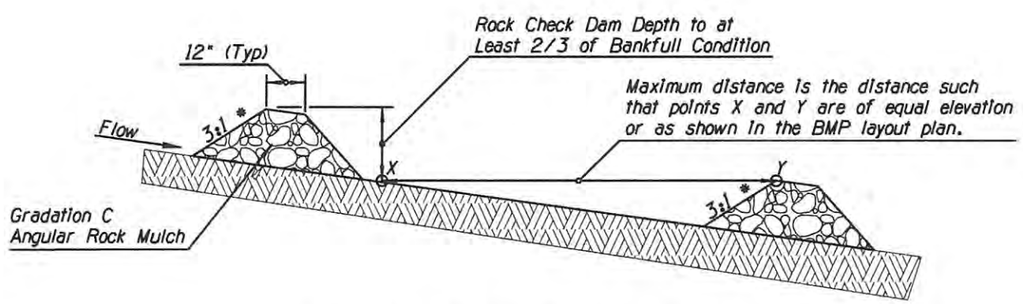


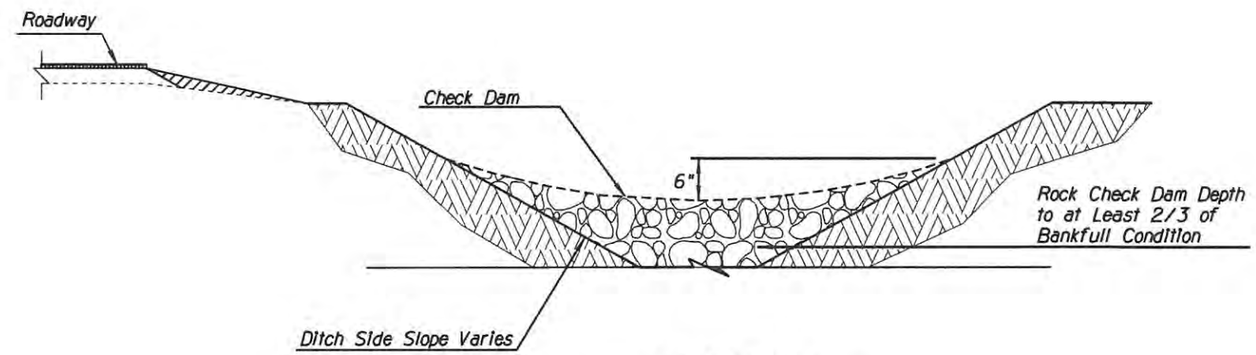
TRAPEZOIDAL DITCH PLAN (NTS)



V-DITCH PLAN (NTS)



ELEVATION ALONG DITCH SLOPE
(NTS)



SECTION A-A
TRAPEZOIDAL- OR V-DITCH
(NTS)

NOTES:

1. Construct Rock Check Dams with angular-shaped Gradation C Rock Mulch as defined in Section 810-2.03 of the Standard Specifications. Natural river-run materials, especially the rounded natural river rocks are not acceptable.
2. * Slope shall be 1(V):6(H) or flatter if Check Dam is within the traffic clear zone/recovery areas as defined in ADOT Roadway Design Guidelines (303.2 to 303.3 Roadside Recovery Area 2007).
3. Field-adjust sizing and spacing of Rock Check Dams as necessary for traffic safety as well as proper functioning of the drainage facilities.
4. Flatten and re-grade Rock Check Dams to the finished grade, level within the ditch, as soon as practicable after Final Stabilization.
5. Field adjust and correct Rock Check Dam BMP immediately if it is causing flooding, erosion, and/or affecting roadway safety.
6. Field adjust to ensure the top of the Rock Check Dam is approximately 2/3 height of the estimated ditch bankfull level.
7. When paid separately, the Rock Check Dam BMP pay/bid item shall include all materials used for this BMP: all ground preparation, furnishing, installing, maintenance, flattening/grading back to the finished grade, as well as returning the area to an acceptable condition as approved by the Engineer.

DETAIL ES9
ROCK CHECK DAM

	NAME	DATE
DESIGN	TAO ZI FONG	05-2011
DESIGN	HAN MENG	05-2011
DRAWN	TAO ZI FONG	05-2011
DRAWN	HAN MENG	05-2011
CHECKED	E LEROY BRADY	05-2011
TEAM LEADER	E LEROY BRADY	05-2011
ROUTE	LOCATION	

ARIZONA DEPARTMENT OF TRANSPORTATION
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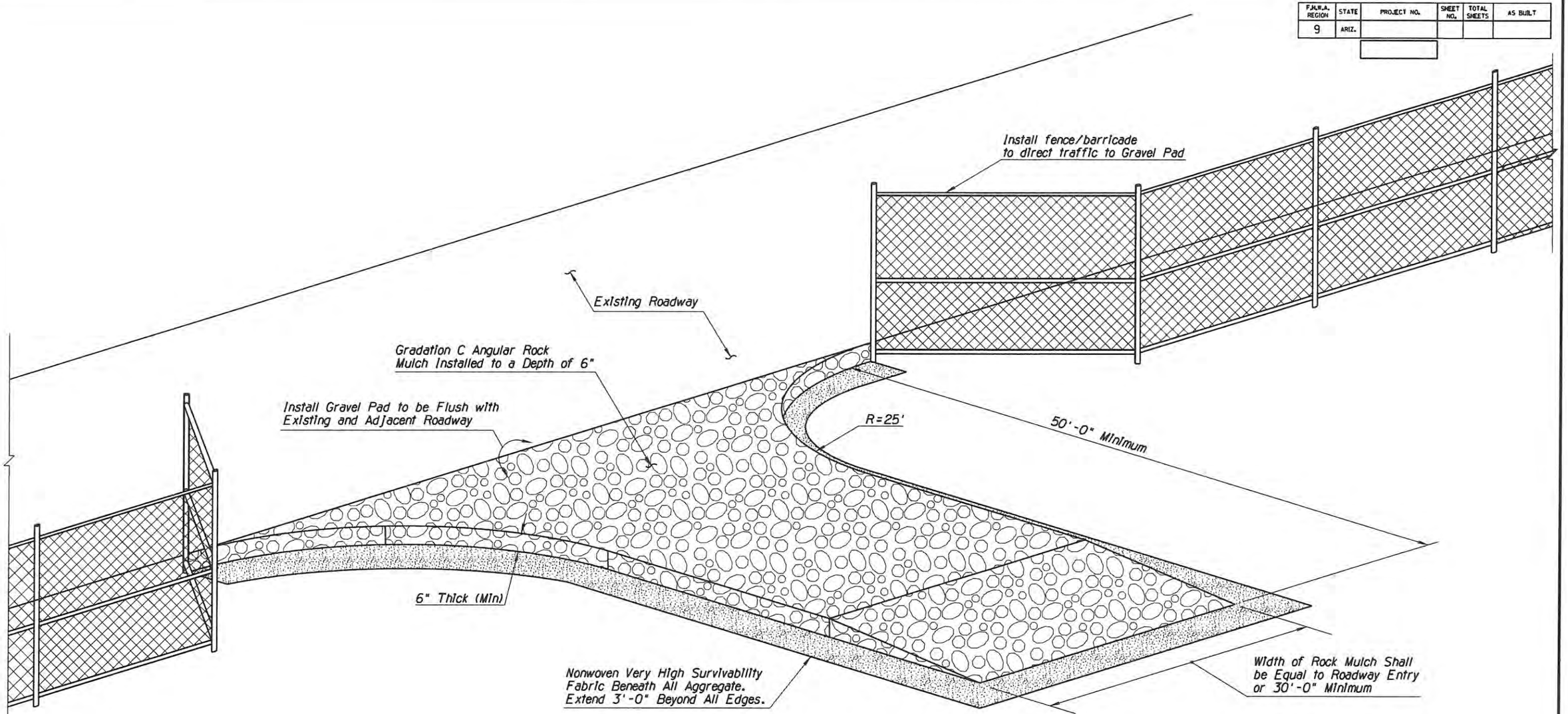


BIRD'S EYE VIEW (NTS)

NOTES:

1. Install Stabilized Construction Entrance/Exit Gravel Pad BMP for traffic entering or exiting a construction site where sedimentation, clay, silt or other pollutants can be tracked onto public roads and/or adjacent water bodies, as approved by the Engineer. It may also be applied for construction entrance/exit wind erosion/dust control, as approved by the Engineer.
2. Locate new Construction Entrance(s)/Exit(s) at appropriate project entrance/exit points as determined in field with the approval of the Engineer. Relocate Stabilized Construction Entrance/Exit Gravel Pad BMP as needed as project progresses. Replace Rock Mulch materials in drive paths when dirt or mud accumulates.
3. Nonwoven Very High Survivability Fabric shall conform to the standards of Sub-section 1014-4.04 of the Standard Specifications.
4. Rock Mulch materials shall be fractured/crushed rocks in angular shape and as defined in the Sub-section 810-2.03 of the Standard Specifications. Natural river-run materials, especially rounded natural river rocks are not acceptable.
5. Field adjust and correct Construction Entrance/Exit Gravel Pad BMP immediately if it is causing flooding and/or affecting roadway safety.
6. When paid separately, the Stabilized Construction Entrance/Exit Gravel Pad BMP's pay/bid item shall include all materials used for this BMP: all ground preparation, furnishing, installing, final removal, and disposal of this temporary BMP, as well as returning the area to an acceptable condition as approved by the Engineer.

DETAIL ES11

STABILIZED CONSTRUCTION ENTRANCE/EXIT GRAVEL PAD

	NAME	DATE
DESIGN	TAO ZI FONG	05-2011
DESIGN	HAN MENG	05-2011
DRAWN	TAO ZI FONG	05-2011
DRAWN	HAN MENG	05-2011
CHECKED	E LEROY BRADY	05-2011
TEAM LEADER	E LEROY BRADY	05-2011
ROUTE	MP	LOCATION

ARIZONA DEPARTMENT OF TRANSPORTATION
INTERMODAL TRANSPORTATION DIVISION
ROADSIDE DEVELOPMENT SECTION

STORMWATER QUALITY PROTECTION & EROSION/SEDIMENT CONTROL DETAILS

SHEET OF

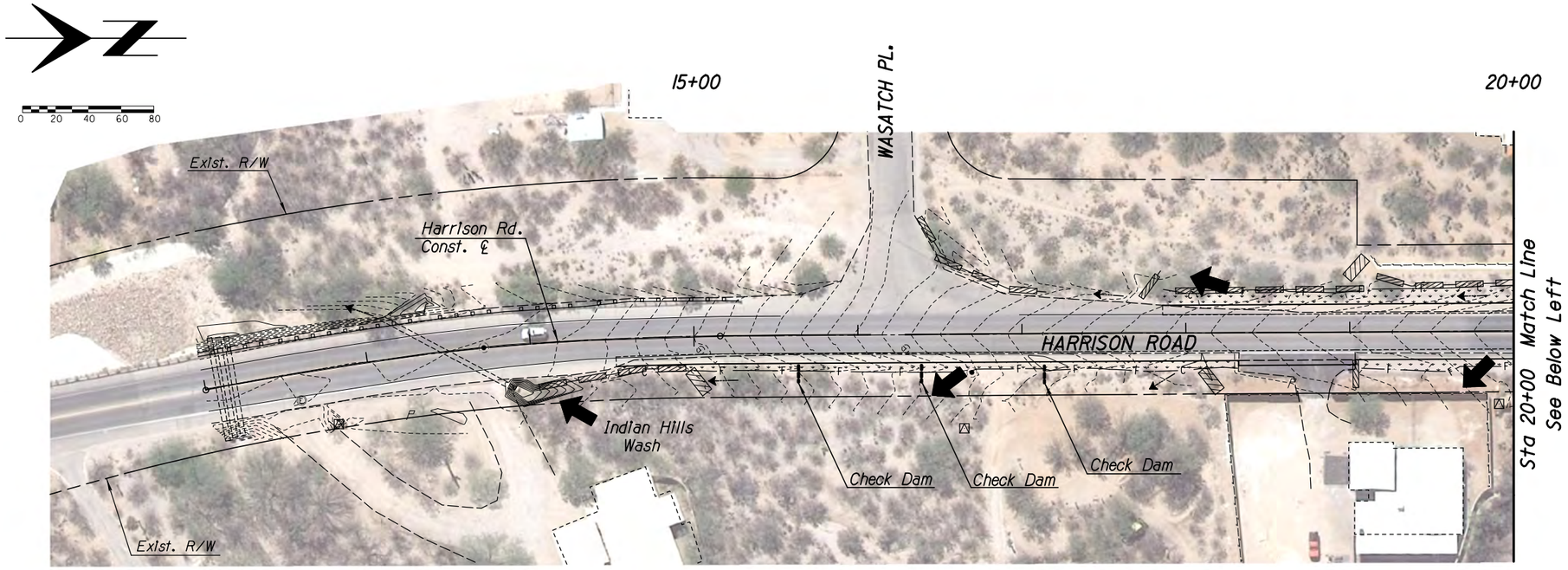
TRACS NO.

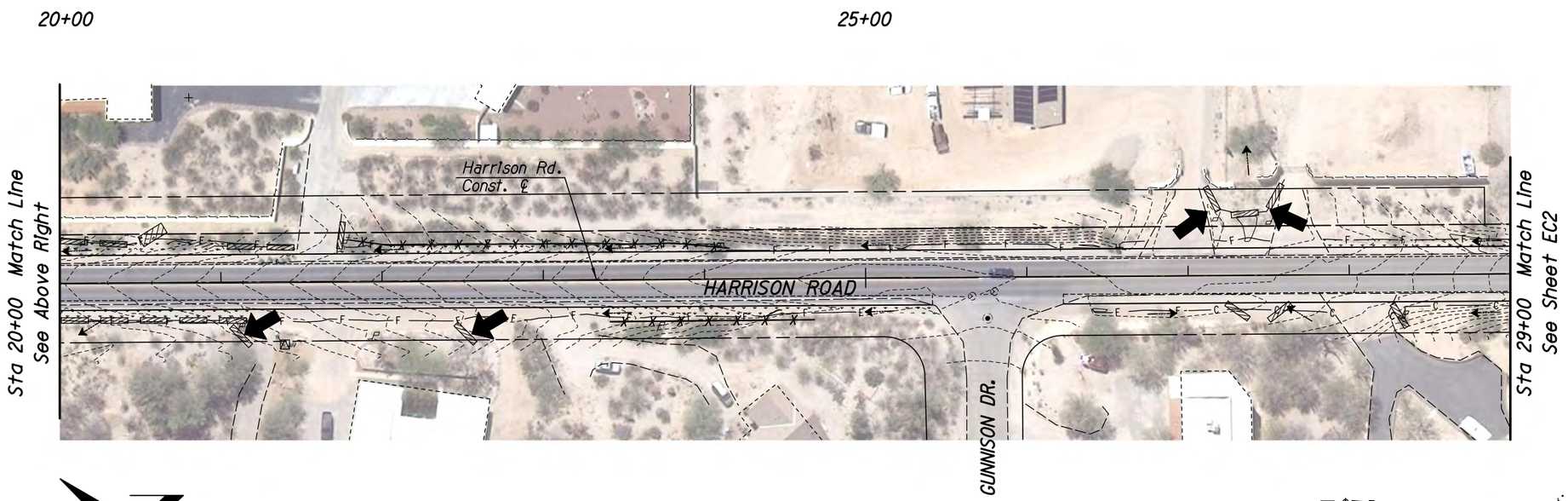
___ OF ___

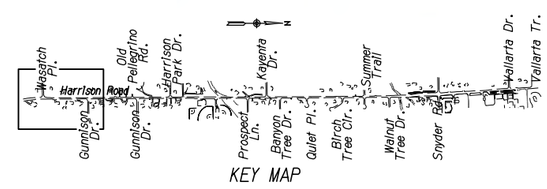
MADE BY | DATE | NO.2 | DESCRIPTION OF REVISION
MADE BY | DATE | NO.1 | DESCRIPTION OF REVISION

V:/ROADSIDE\users\b1525\ 3:05:56 PM 4/26/2011 V:\Roadside\RdsdDev\ERO_BMPs\RDS_Updated_BMPs\ES11_Stabilized_Const_Entrance_Exit.dgn

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	PPM 0(227) A	1	9	
		0000 PM PPM			







KEY MAP

LEGEND

- Preservation Fencing
- Directional Flow Arrows
- 20" Sediment Log
- 9" Sediment Wattle/ Earthen Berm
- Check Dam
- Cut Limits
- Fill Limits
- Seed Mix 2/ Plus Rock Mulch
- Low Point- Flow Exits Project Limits
- Permanent Rip-Rap (Grouted)

SWPPP Notes:

Refer to BMP Detail for Installation. Included as Appendix of this SWPPP.

No drywells are located within 1/4 mile of project limits.

Refer to sheet R2 & Detail K of the project plans and the project specifications for all seeding and inert ground cover.

For preservation fencing refer to demolition plans and Pima County Preservation Fence Detail shown on sheet EC9 of these Erosion Control Plans.

Riprap is shown for reference only and is part of final stabilization. Refer to Roadway plans RD1-RD12 for riprap.

Erosion/Sediment controls shall be placed on all side slope boundaries only when adjacent side slope is at lower elevation than the project area and has potential to receive stormwater runoff. Adjacent slopes at higher elevation than the project area do not require perimeter control.

SCALES: Horiz: 1" = 40' Vert: | Sheet EC1 of EC9 | Page 1 OF 9

Priscilla S. Cornelio, P.E., Director

No.	Revision Description	Engineer	Date

		Date
Designed	J DANA	04/2014
Drawn	J DANA	04/2014
Checked	D MOSEKE	04/2014
Proj. Engr.		

REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 34006 DOUGLAS MICHAEL MOSEKE DATE SIGNED 03/30/14 ARIZONA U.S.A. Expires 03/30/2017

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Pima County Department of Transportation

EROSION CONTROL PLANS

SABINO HIGH SCHOOL HARRISON ROAD BICYCLE LANE
W.O. #41EHBL
TRACS No: 0000 PM PPM SL699 OIC

8/14/2014 V:\52811\VCE\181718026 - HARRISON ROAD\DESIGN\DGN\026-SWPPP01.DGN

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
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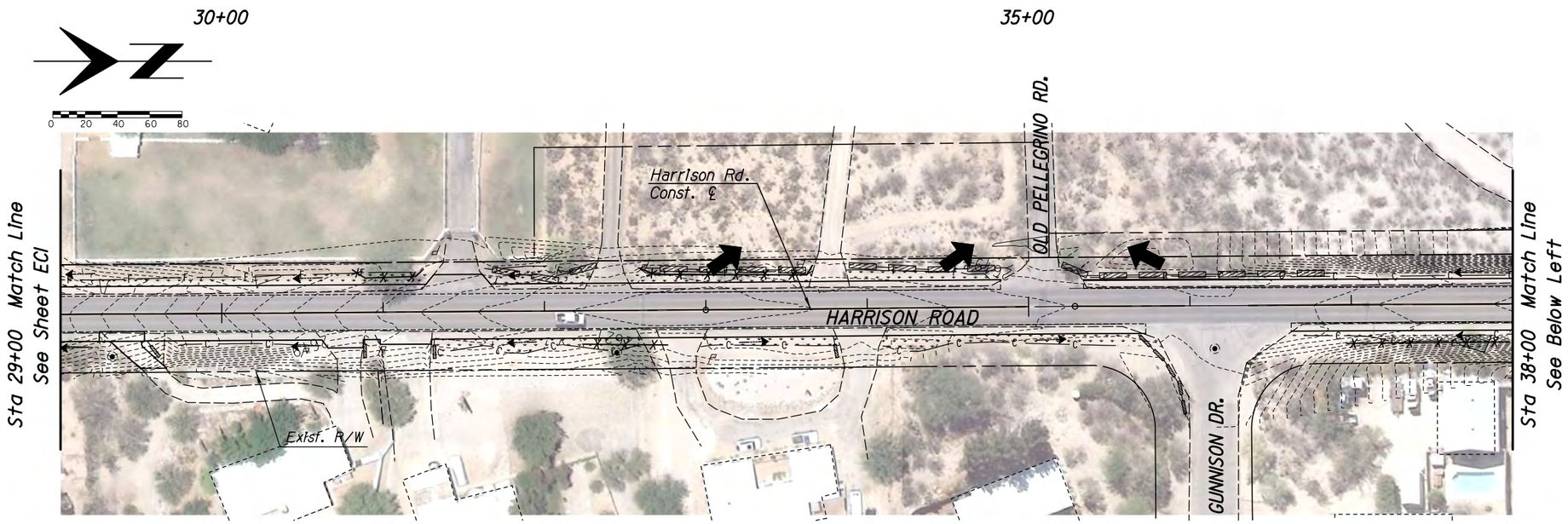
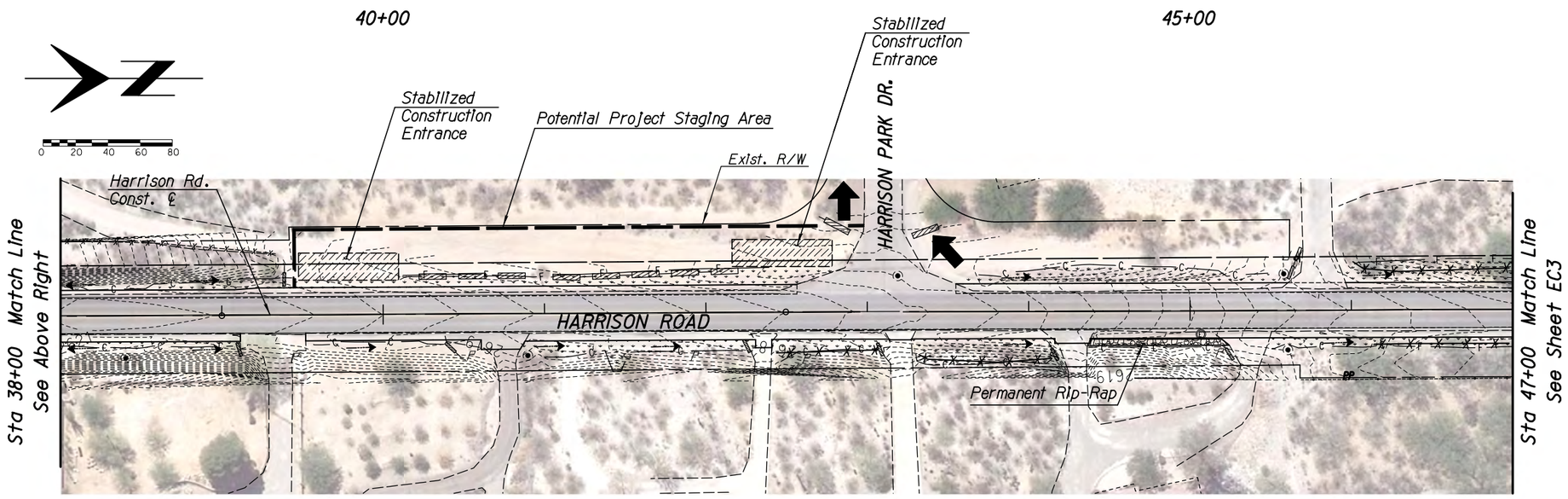
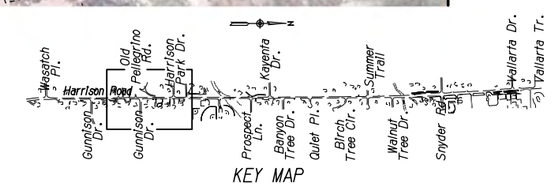
		0000 PM PPM			







KEY MAP

LEGEND

- Preservation Fencing
- Directional Flow Arrows
- 20" Sediment Log
- 9" Sediment Wattle/ Earthen Berm
- Check Dam
- Cut Limits
- Fill Limits
- Permanent Rip-Rap (Grouted)
- Stabilized Construction Entrance
- Limits of Potential Staging Area
- Seed Mix 2/ Plus Rock Mulch
- Low Point- Flow Exits Project Limits

SWPPP Notes:

Refer to BMP Detail for Installation. Included as Appendix of this SWPPP.

No drywells are located within 1/4 mile of project limits.

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Priscilla S. Cornelio, P.E., Director

		Date
Designed	J DANA	04/2014
Drawn	J DANA	04/2014
Checked	D MOSEKE	04/2014
Proj. Engr.		

No.	Revision Description	Engineer	Date

REGISTERED PROFESSIONAL ENGINEER (CIVIL) 34006 DOUGLAS MICHAEL MOSEKE ARIZONA U.S.A. Expires 09/30/2017

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Pima County Department of Transportation

EROSION CONTROL PLANS

SABINO HIGH SCHOOL HARRISON ROAD BICYCLE LANE
W.O. #4TEHBL
TRACS No: 0000 PM PPM SL699 OIC

SCALES: Horiz: 1" = 40' Vert:

Sheet EC2 of EC9

8/14/2014 V:\52817\VCE\181718026 - HARRISON ROAD\DESIGN\DGN\026-SWPPP02.DGN

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
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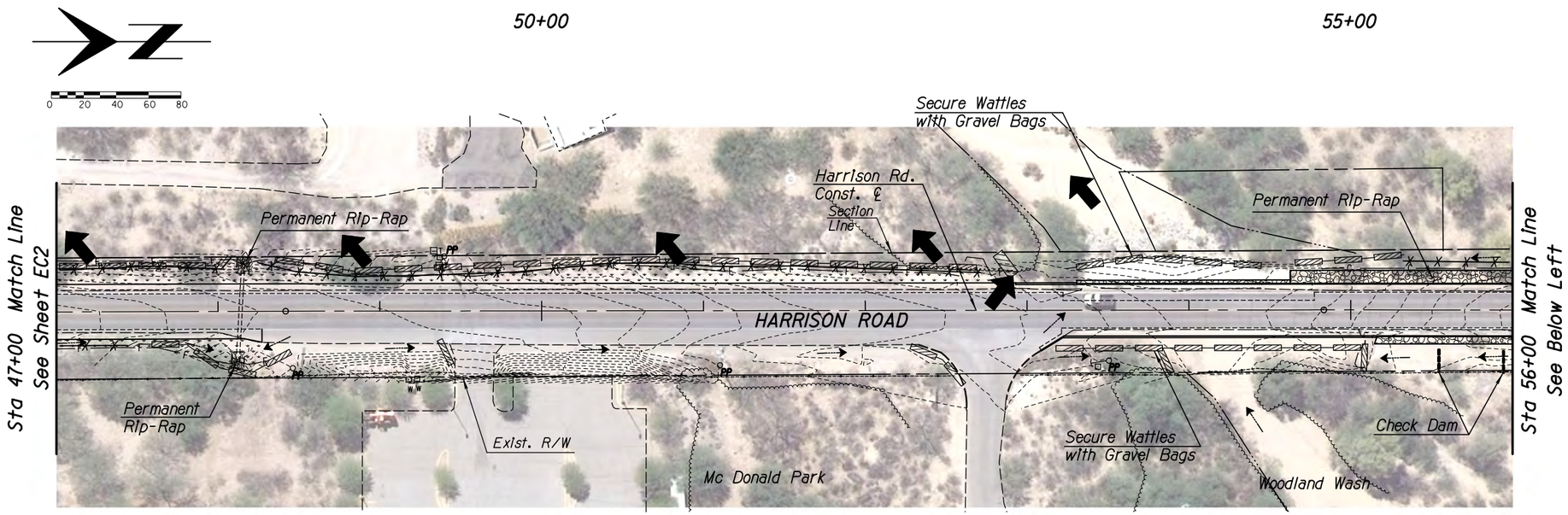
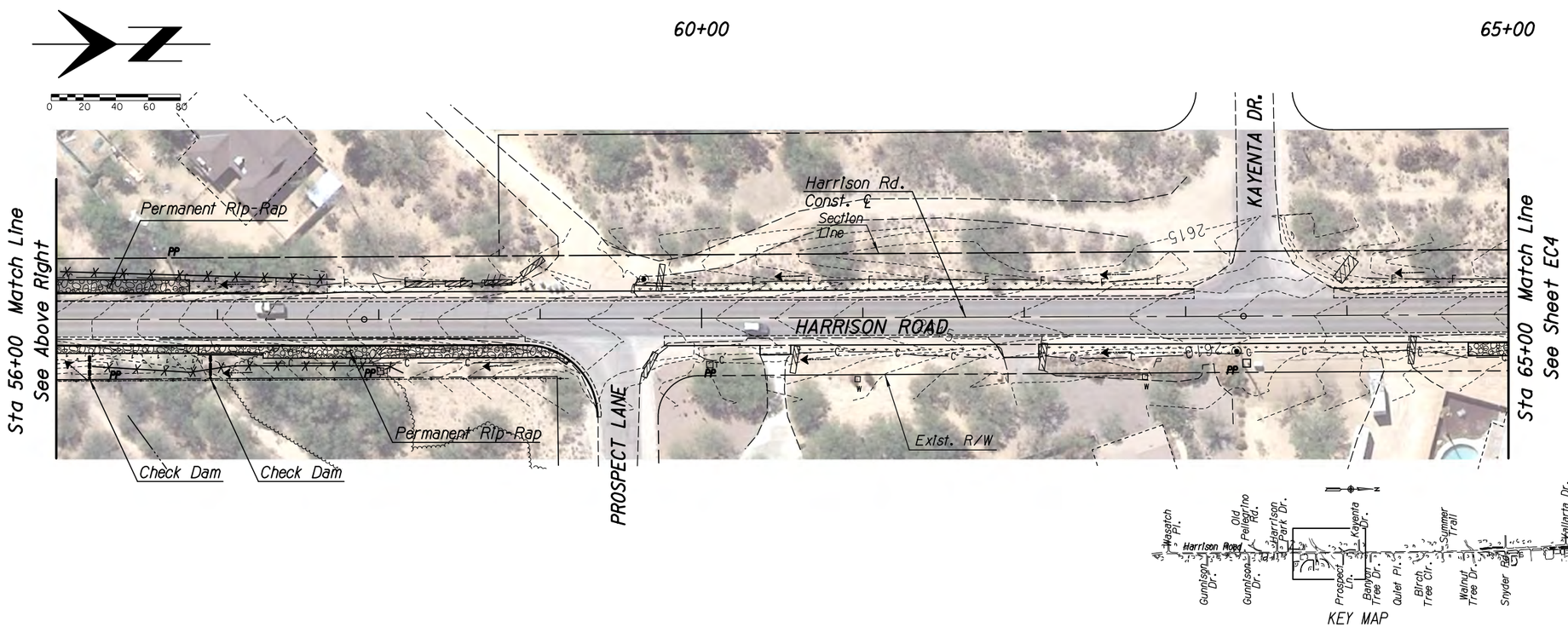
		0000 PM PPM			





LEGEND

- Preservation Fencing
- Directional Flow Arrows
- 20" Sediment Log
- 9" Sediment Wattle/ Earthen Berm
- Check Dam
- C — C Cut Limits
- F — F Fill Limits
- Seed Mix 2/ Plus Rock Mulch
- Low Point- Flow Exits Project Limits
- Permanent Rip-Rap (Grouted)

SWPPP Notes:

Refer to BMP Detail for Installation. Included as Appendix of this SWPPP.

No drywells are located within 1/4 mile of project limits.

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SCALES:	Horiz: 1" = 40'	Sheet EC3 of EC9	Page 3 OF 9
	Vert:		

Priscilla S. Cornelio, P.E., Director

		Date
Designed	J DANA	04/2014
Drawn	J DANA	04/2014
Checked	D MOSEKE	04/2014
Proj. Engr.		

No.	Revision Description	Engineer	Date

REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 34006 DOUGLAS MICHAEL MOSEKE Date Signed 03/30/17 ARIZONA U.S.A. Expires 03/30/2017

Pima County Department of Transportation

EROSION CONTROL PLANS

SABINO HIGH SCHOOL HARRISON ROAD BICYCLE LANE
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TRACS No: 0000 PM PPM SL699 OIC

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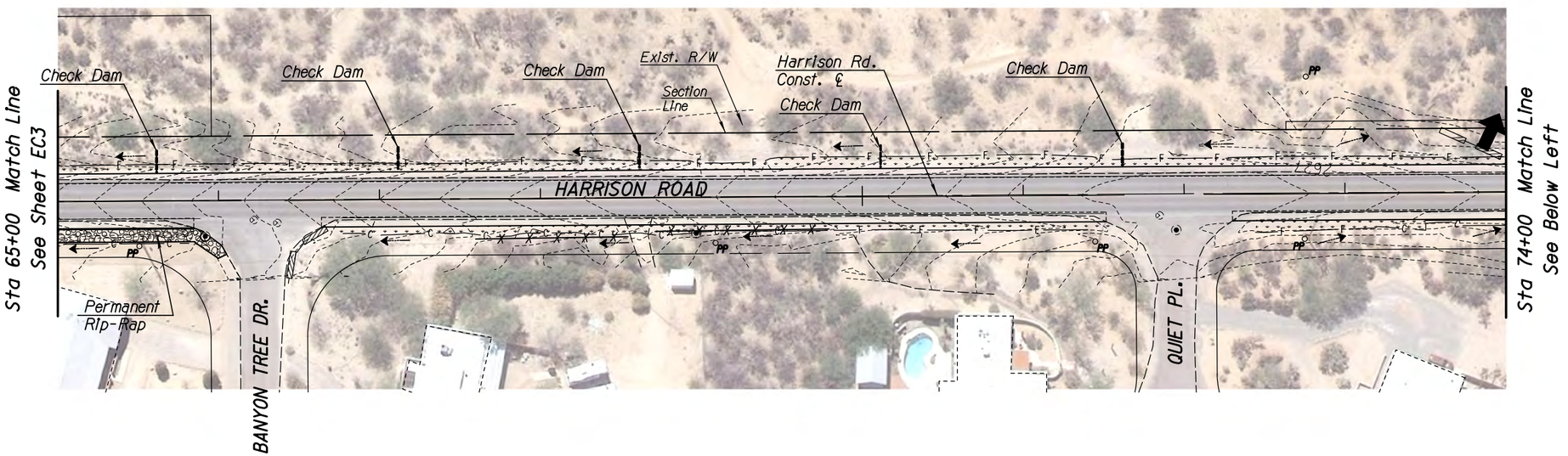
8/14/2014 V:\52811\active\181710826 - HARRISON ROAD\QUESTION\0026-SWPPP\03-LOA

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	PPM 0(227) A	4	9	
		0000 PM PPM			

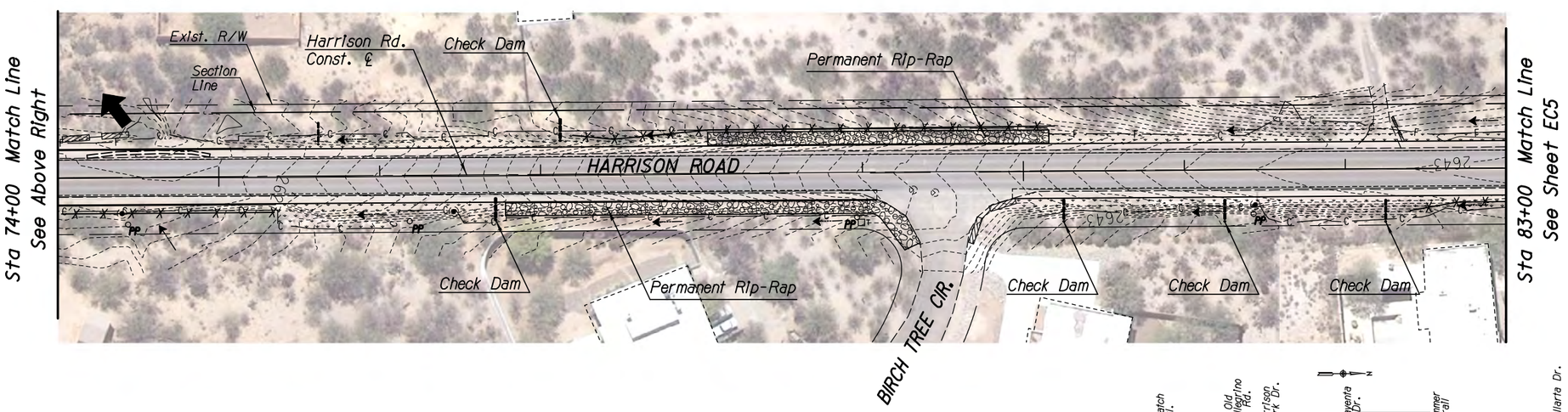
65+00

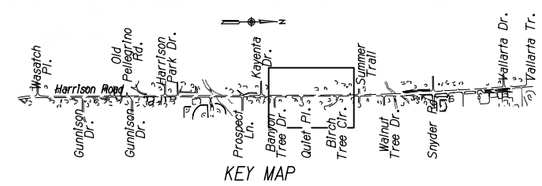
70+00



75+00

80+00





KEY MAP

LEGEND

- Preservation Fencing
- Directional Flow Arrows
- 20" Sediment Log
- 9" Sediment Wattle/ Earthen Berm
- Check Dam
- Cut Limits
- Fill Limits
- Seed Mix 2/ Plus Rock Mulch
- Low Point- Flow Exits Project Limits
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SWPPP Notes:

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Priscilla S. Cornelio, P.E., Director

No.	Revision Description	Engineer	Date

		Date
Designed	J DANA	04/2014
Drawn	J DANA	04/2014
Checked	D MOSEKE	04/2014
Proj. Engr.		

REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 34006 (DOUGLAS MICHAEL MOSEKE) STATE OF ARIZONA Expires 09/30/2017

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Pima County Department of Transportation

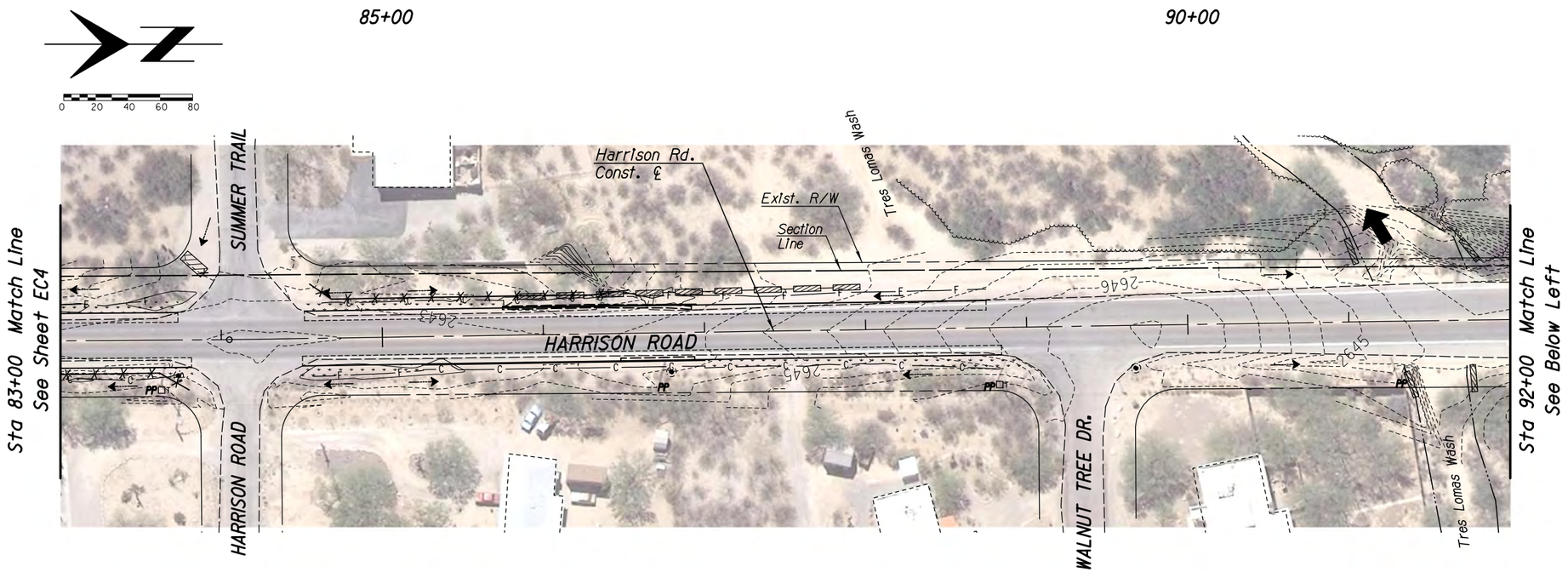
EROSION CONTROL PLANS

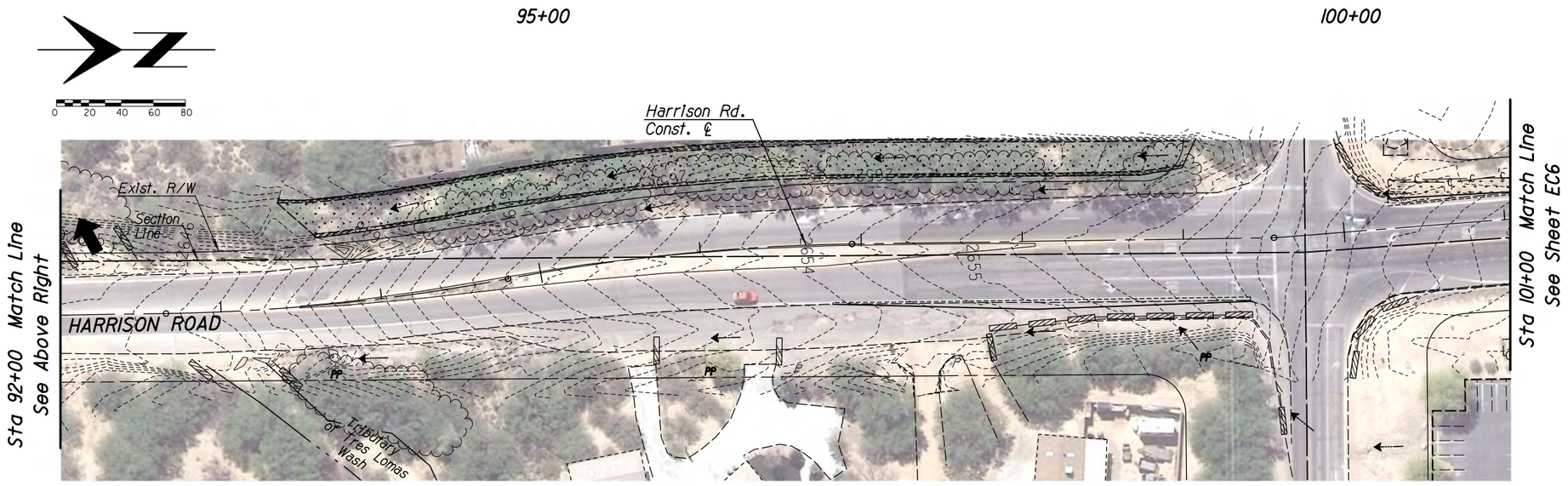
SABINO HIGH SCHOOL HARRISON ROAD BICYCLE LANE
W.O. #4TEHBL
TRACS No: 0000 PM PPM SL699 OIC

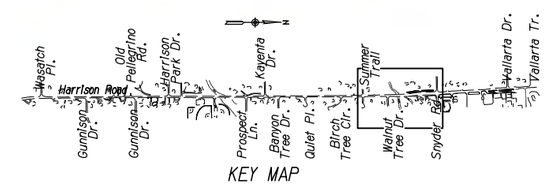
SCALES: Horiz: 1" = 40' Vert:

Sheet EC4 of EC9

8/14/2014 V:\52811\Vet\181718026 - HARRISON ROAD\QUESTION\DGN\026-SWPPP04.DGN







KEY MAP

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	PPM 0(227) A	5	9	

0000 PM PPM

LEGEND

- Preservation Fencing
- Directional Flow Arrows
- 20" Sediment Log
- 9" Sediment Wattle/ Earthen Berm
- Check Dam
- C —— C Cut Limits
- F —— F Fill Limits
- Seed Mix 2/ Plus Rock Mulch
- Low Point- Flow Exits Project Limits
- Permanent Rip-Rap (Grouted)

SWPPP Notes:

Refer to BMP Detail for Installation. Included as Appendix of this SWPPP.

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SCALES: Horiz: 1" = 40' Vert:

Sheet EC5 of EC9

Pima County Department of Transportation

Priscilla S. Cornelio, P.E., Director

		Date
Designed	J DANA	04/2014
Drawn	J DANA	04/2014
Checked	D MOSEKE	04/2014
Proj. Engr.		

No.	Revision Description	Engineer	Date

REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 34006 DOUGLAS MICHAEL MOSEKE Date Signed 03/30/17 ARIZONA U.S.A. Expires 03/30/2017

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EROSION CONTROL PLANS

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W.O. #41EHBL
TRACS No: 0000 PM PPM SL699 OIC

8/14/2014 V:\52817\VCI\181\180826 - HARRISON ROAD\QUESTION\NON\026-SWPPP\EC5.DGN

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
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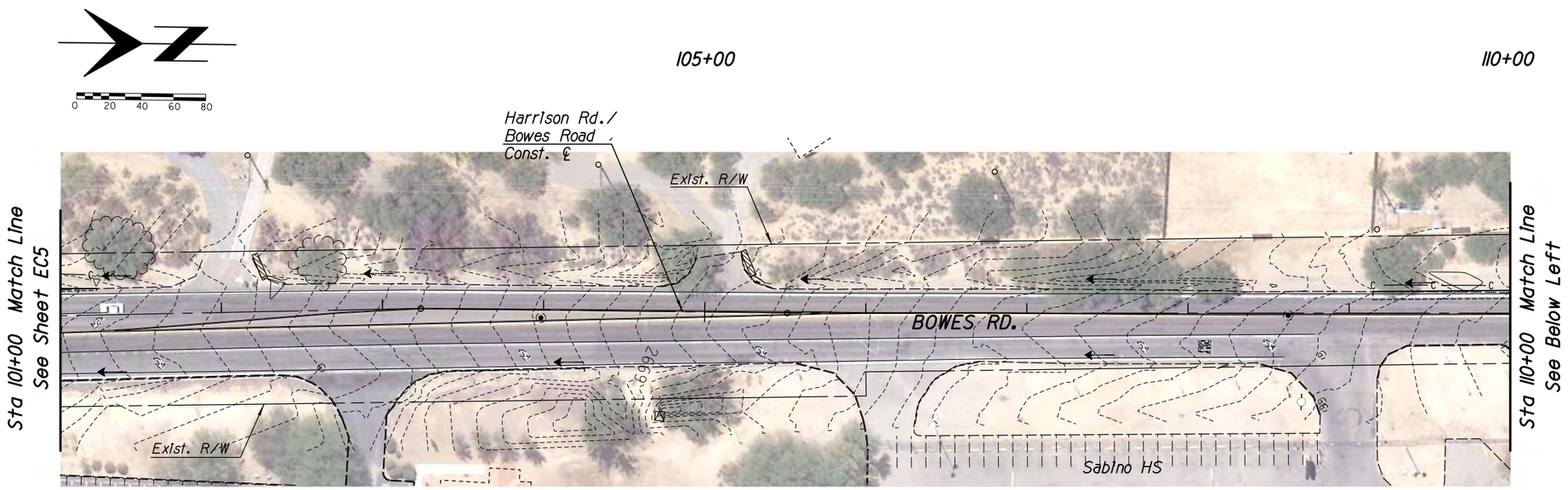
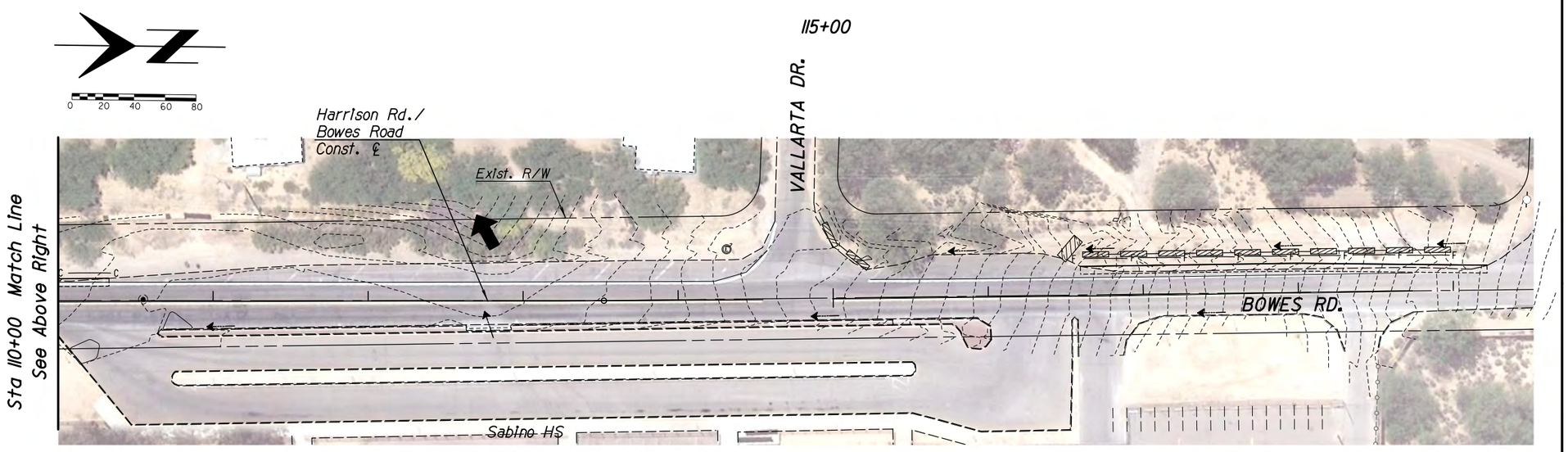
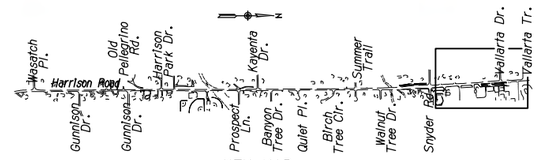
		0000 PM PPM			







KEY MAP

LEGEND

- Preservation Fencing
- Directional Flow Arrows
- 20" Sediment Log
- 9" Sediment Wattle/ Earthen Berm
- Check Dam
- C —— C Cut Limits
- F —— F Fill Limits
- Seed Mix 2/ Plus Rock Mulch
- Low Point- Flow Exits Project Limits
- Permanent Rip-Rap (Grouted)

SWPPP Notes:

Refer to BMP Detail for Installation. Included as Appendix of this SWPPP.

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SCALES: Horiz: 1" = 40' Vert:

Sheet EC6 of EC9

Priscilla S. Cornelio, P.E., Director

		Date
Designed	J DANA	04/2014
Drawn	J DANA	04/2014
Checked	D MOSEKE	04/2014
Proj. Engr.		

No.	Revision Description	Engineer	Date

REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 34006 DOUGLAS MICHAEL MOSEKE Date Signed 03/30/14 ARIZONA U.S.A. Expires 03/30/2017

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Tucson, AZ 85711
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Pima County Department of Transportation

EROSION CONTROL PLANS

SABINO HIGH SCHOOL HARRISON ROAD BICYCLE LANE
W.O. #4TEHBL
TRACS No: 0000 PM PPM SL699 OIC

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	PPM 0(227) A	7	9	
		0000 PM PPM			

Station	Plan Reference	Check Dam Left	Check Dam Right	Check Dam Spacing (ft)	■	Sediment Wattle Left	Sediment Wattle Right	Sediment Wattle Spacing (ft)	Sediment Wattle Depth (ft)	Sediment Logs Left	Sediment Logs Right	Sediment Logs Spacing (ft)	Preservation Fence Left	Preservation Fence Right	Preservation Fence Spacing (ft)	Check Dam (ft)	Sediment Wattle (ft)	Cut & Fill Transitions (cy)	Sediment Logs (ft)	Preservation Fence (ft)	End Sections (cy)	Headwalls (cy)	Granite Mulch (cy) **	REMARKS
		TYPE INSTALLATION																QUANTITIES*						
						Check Dam				Sediment Wattle			Sediment Logs		Preservation Fence									
14+04 to 14+94							X										90						0.7	Detail ES3
14+97 to 15+08							X										17						0.1	Detail ES3
15+63			X													10							0.5	Detail ES9
16+30			X													10							0.5	Detail ES9
17+13			X													10							0.5	Detail ES9
19+00										X									10				0.8	Detail ES1
17+94 to 19+02						X											108						0.8	Detail ES3
18+10 to 18+20							X										17						0.1	Detail ES3
18+99 to 19+10						X											17						0.1	Detail ES3
19+17 to 20+46						X											131						1.0	Detail ES3
20+03 to 21+17							X										117						0.9	Detail ES3
20+50										X									10				0.8	Detail ES1
20+51 to 20+65						X											17						0.1	Detail ES3
20+70 to 21+46						X											76						0.6	Detail ES3
21+81 to 24+10													X							229				Preservation Fence, See Sheet EC9
23+40 to 24+60														X						120				Preservation Fence, See Sheet EC9
27+11 to 27+60						X											69						0.5	Detail ES3
30+81 to 31+25													X							40				Preservation Fence, See Sheet EC9
31+63 to 32+32						X											71						0.5	Detail ES3
32+26 to 32+76														X						50				Preservation Fence, See Sheet EC9
32+59 to 33+66													X							107				Preservation Fence, See Sheet EC9
32+59 to 33+62						X											103						0.8	Detail ES3
33+89 to 34+91						X											102						0.8	Detail ES3
35+21 to 36+93						X											173						1.3	Detail ES3
36+99 to 37+94														X						95				Preservation Fence, See Sheet EC9
40+12 to 40+88						X											77						0.6	Detail ES3
41+05 to 42+13						X											108						0.8	Detail ES3
42+47 to 43+04														X						57				Preservation Fence, See Sheet EC9
42+70 to 42+89						X											21						0.2	Detail ES3
43+28 to 43+46						X											19						0.1	Detail ES3
SHEET TOTAL																30	1333		20	698			12.5	

See Project Demolition Plans for additional Erosion Control Details

Notes:
The placement of all Erosion Control Devices listed above will be subject to change and may be adjusted by the Field Engineer in coordination with the Project Designer.

* Erosion Control Quantities will be determined by the Field Engineer.

** Granite mulch quantities consist of material used for check dams, sediment wattles, and sediment logs.

■ Maximum Height of 12 in; unless otherwise specified.

EROSION CONTROL SHEET

SCALES:	Horiz:	Sheet EC7 of EC9	Page 7 of 9
	Vert:		

Pima County Department of Transportation

Priscilla S. Cornelio, P.E., Director

	Designed	Drawn	Checked	Proj. Engr.
	J DANA	J DANA	D MOSEKE	
Date	04/2014	04/2014	04/2014	

No.	Revision Description	Engineer	Date

REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 34106 DOUGLAS MICHAEL MOSEKE Date Signed 09/30/14 ARIZONA U.S.A. Expires 09/30/2017

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EROSION CONTROL PLANS
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W.O. #4TEHBL
TRACS No: 0000 PM PPM SL699 OIC

9/17/2014 V:\5258171\active\181710826 HARRISON ROAD\DESIGN\DGN\826_SWPPP00-1.DGN

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	PPM 0(227) A	8	9	
		0000 PM PPM			

Station	TYPE INSTALLATION: Check Dam Plan Reference	Check Dam Left	Check Dam Right	Check Dam Spacing (ft)	■	Sediment Wattle Left	Sediment Wattle Right	Sediment Wattle Spacing (ft)	Sediment Wattle Depth (ft)	Sediment Logs Left	Sediment Logs Right	Sediment Logs Spacing (ft)	Preservation Fence Left	Preservation Fence Right	Preservation Fence Spacing (ft)	QUANTITIES*: Check Dam (ft)	Sediment Wattle (ft)	Cut & Fill Transitions (cy)	Sediment Logs (ft)	Preservation Fence (ft)	End Sections (cy)	Headwalls (cy)	Granite Mulch (cy) **	REMARKS
																								See Project Demolition Plans for additional Erosion Control Details
43+44 to 44+02														X						58				Preservation Fence, See Sheet EC9
46+15 to 46+86													X							71				Preservation Fence, See Sheet EC9
46+29 to 46+84														X						59				Preservation Fence, See Sheet EC9
47+02 to 48+08						X																	0.8	Detail ES3
47+03 to 48+15													X							112				Preservation Fence, See Sheet EC9
47+02 to 47+52														X						50				Preservation Fence, See Sheet EC9
47+45 to 48+48							X										105						0.8	Detail ES3
48+14 to 52+85													X							471				Preservation Fence, See Sheet EC9
48+36 to 52+69						X											433						3.3	Detail ES3
52+82 to 52+92						X											17						0.1	Detail ES3
53+23 to 55+06							X										183							Detail ES3, Secure Wattle with Gravel Bags
53+24 to 54+45						X											121							Detail ES3, Secure Wattle with Gravel Bags
54+65 to 55+33						X											67						0.5	Detail ES3
55+25 to 55+98													X							73			0.4	Preservation Fence, See Sheet EC9
55+54		X														13							0.5	Detail ES9
55+94		X														13							0.5	Detail ES9
56+02 to 58+17													X							215				Preservation Fence, See Sheet EC9
56+20		X														13							0.5	Detail ES9
56+23 to 59+26														X						303				Preservation Fence, See Sheet EC9
56+95		X														13							0.5	Detail ES9
58+19 to 59+02						X											88						0.7	Detail ES3
63+94 to 64+04						X											17						0.1	Detail ES3
65+62		X														13							0.5	Detail ES9
67+12		X														13							0.5	Detail ES9
67+60 to 68+57														X						97				Preservation Fence, See Sheet EC9
68+62		X														13							0.5	Detail ES9
68+71 to 69+80														X						109				Preservation Fence, See Sheet EC9
70+12		X														13							0.5	Detail ES9
71+62		X														13							0.5	Detail ES9
SHEET TOTAL																117	1137			1618			11.2	

Notes:
The placement of all Erosion Control Devices listed above will be subject to change and may be adjusted by the Field Engineer in coordination with the Project Designer.

* Erosion Control Quantities will be determined by the Field Engineer.

** Granite mulch quantities consist of material used for check dams, sediment wattles, and sediment logs.

■ Maximum Height of 12 in; unless otherwise specified.

EROSION CONTROL SHEET

SCALES:	Horiz: / Vert:	Sheet EC8 of EC9	Page 8 of 9

Pima County Department of Transportation

Priscilla S. Cornelio, P.E., Director

Designed	J DANA	04/2014
Drawn	J DANA	04/2014
Checked	D MOSEKE	04/2014
Proj. Engr.		

No.	Revision Description	Engineer	Date

REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 34006 DOUGLAS MICHAEL MOSEKE Date Signed 09/30/14 ARIZONA U.S.A. Expires 09/30/2017

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www.stantec.com

EROSION CONTROL PLANS
SABINO HIGH SCHOOL HARRISON ROAD BICYCLE LANE
W.O. #4TEHBL
TRACS No: 0000 PM PPM SL699 OIC

9/17/2014 V:\52817\active\187110026 HARRISON ROAD\DESIGN\026_SWPPP\BB-1.DGN

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	PPM 0(227) A	9	9	

0000 PM PPM

Station	Plan Reference	TYPE INSTALLATION: Check Dam Left	Check Dam Right	Check Dam Spacing (ft)	■	Sediment Wattle Left	Sediment Wattle Right	Sediment Wattle Spacing (ft)	Sediment Wattle Depth (ft)	Sediment Logs Left	Sediment Logs Right	Sediment Logs Spacing (ft)	Preservation Fence Left	Preservation Fence Right	Preservation Fence Spacing (ft)	QUANTITIES*: Check Dam (ft)	Sediment Wattle (ft)	Cut & Fill Transitions (cy)	Sediment Logs (ft)	Preservation Fence (ft)	End Sections (cy)	Headwalls (cy)	Granite Mulch (cy) **	REMARKS: See Project Demolition Plans for additional Erosion Control Details
73+66 to 73+97						X											34						0.3	Detail ES3
74+03 to 74+53						X											53						0.4	Detail ES3
74+03 to 75+38														X						135				Preservation Fence, See Sheet EC9
75+62		X														13							0.5	Detail ES9
76+72			X													13							0.5	Detail ES9
77+12		X														13							0.5	Detail ES9
77+18 to 80+22													X							304				Preservation Fence, See Sheet EC9
80+19 to 81+18						X											98						0.8	Detail ES3
80+25			X													13							0.5	Detail ES9
81+25			X													13							0.5	Detail ES9
82+25			X													13							0.5	Detail ES9
82+36 to 83+00														X						64				Preservation Fence, See Sheet EC9
83+00 to 83+78														X						81				Preservation Fence, See Sheet EC9
83+77 to 83+90						X											17						1.0	Detail ES3
84+55 to 86+53													X							198				Preservation Fence, See Sheet EC9
85+74 to 87+97						X											224						1.7	Detail ES3
97+81 to 99+42							X										162						1.3	Detail ES3
116+48 to 116+58						X											17						1.0	Detail ES3
116+62 to 118+98						X											236						1.8	Detail ES3
SHEET TOTAL																78	841			782			11.3	

Notes:
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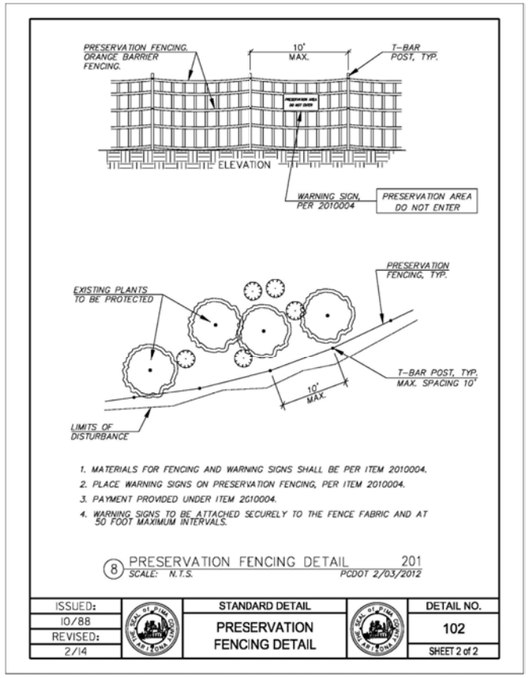

SWPPP DETAILS

EROSION CONTROL SHEET

SCALES:	Horiz: / Vert:	Sheet EC9 of EC9	Page 9 of 9

Pima County Department of Transportation

Priscilla S. Cornelio, P.E., Director

No.	Revision Description	Engineer	Date

			Date
Designed	J DANA		04/2014
Drawn	J DANA		04/2014
Checked	D MOSEKE		04/2014
Proj. Engr.			

REGISTERED PROFESSIONAL ENGINEER (CIVIL) 34006 DOUGLAS MICHAEL MOSEKE ARIZONA U.S.A. Expires 09/30/2017

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8/14/2014 V:\32817\ACTIVE\181718026 - HARRISON ROAD\DESIGN\DGN\026-SWPPP01.DGN