

ARTA Roadways Drainage Meeting

December 5, 2023

- *Present:*
- Sarah Young
- Vern Adam – Aurora Water
- Janet Bender – Aurora Water
- Dave Center – ARTA/AECOM Design Manger
- Will Carrier – ARTA/AECOM Drainage Lead

Objective: The purpose of this meeting is to discuss impacts on ARTA projects in various stages of development and the impacts from the November 9, 2023 Issuance of a new Drainage Criteria

Minutes:

- ARTA reviewed the status of current projects in review by the City (see attached map)
- Projects with approved PDRs and ready to submit CDs (Red)
 - 26th Ave E-470 to The Aurora Highlands Pkwy
 - Aerotropolis Pkwy 32nd Ave to 48th Ave
 - 48th Ave EB E-470 to Aerotropolis Pkwy, WB from Harvest Mile to Aerotropolis Pkwy
- Projects in the ISP/PDR submitted at least once (Orange)
 - 32nd to 26th Realignment (Received 1st review comments, addressing)
 - The Aurora Highlands Pkwy (In review by City, 4th review, CLOMR in review by City) only one with permanent ponds
 - 48th Ave WB E-470 to Harvest Mile (Former Windler, 4th Review addressing comments)
 - 48th Ave Phase 2 (Aerotropolis Pkwy to Monaghan Rd) Received 1st PDR comments and addressing)
- Projects in development (Green)
 - 26th Ave Phase 2 (Aerotropolis Pkwy to Monaghan Rd)
 - Aerotropolis Pkwy 26th Ave interchange
 - ATEC N-S Road (26th to 48th)
 - ATEC 38th Ave (Aerotropolis Pkwy to Monaghan Rd)
 - NB Picadilly Rd (38th Ave to 56h Ave) Pre-Submittal Meeting schedule for 12/21 various approved reports, studies, and plans)
- Any PDR currently under review will continue to use the the Report format prior to November 2023. Those projects going into CDs will use the FDR format in the updated Drainage Criteria Manual.
- Hydrology – New impervious and intensity equations result in increased off-site flows.
 - Will explained that the increase in offsite flows would increase the size of the ditches and ponds. The increased pond and ditch sizes impact the construction and drainage easements that have already been obtained ot are in the process of being acquired.

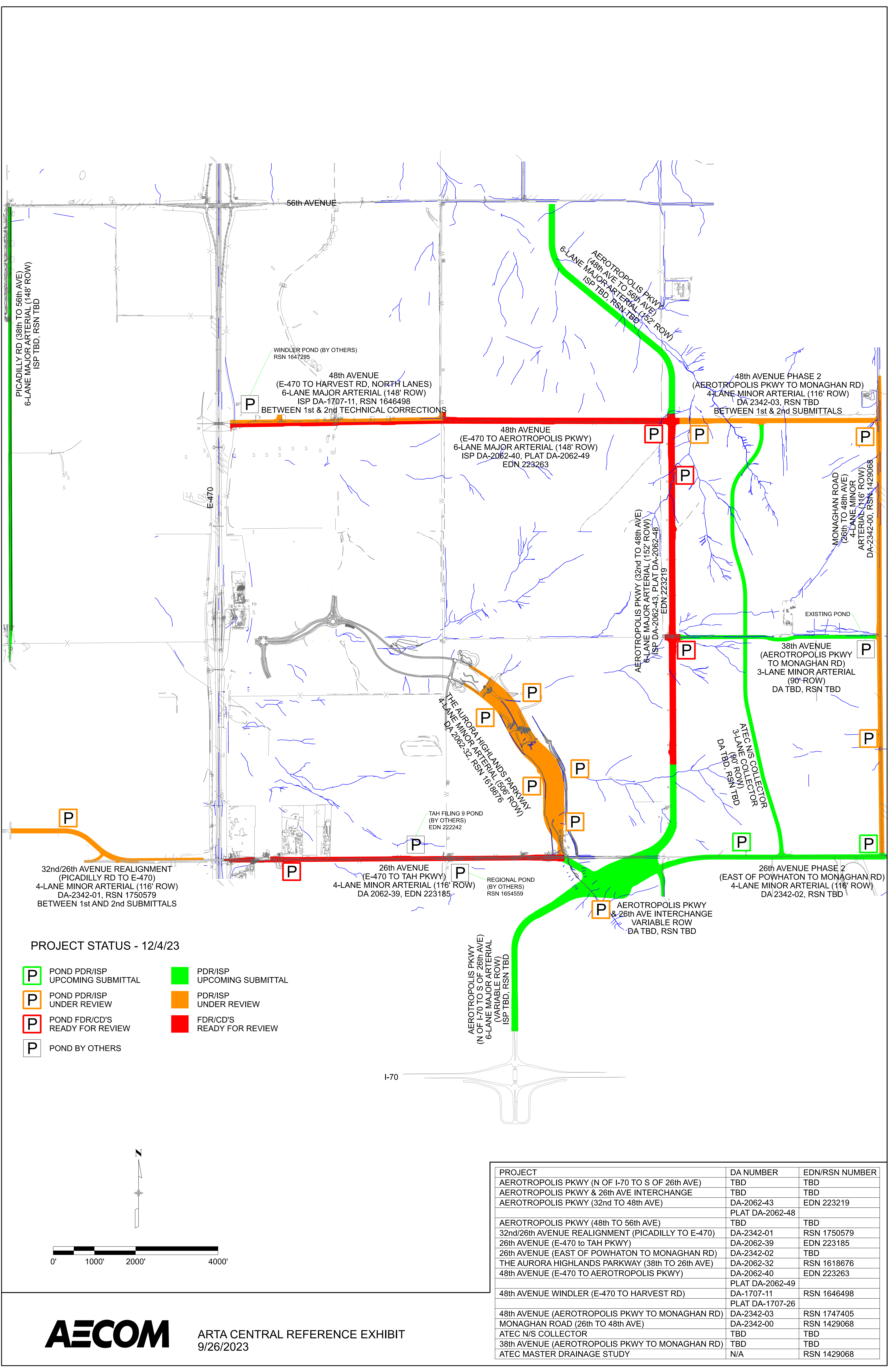
- Will explained the ponds were temporary and would be replaced by regional ponds when the currently undeveloped agricultural land is developed.
- Sarah stated it would be acceptable to use the previous hydrology criteria established prior to the November 2023 update as the regional ponds built as part of the future developments will be required to meet the new criteria.
- Detention Ponds – New criteria states that forebays will be 1 foot above the WQCV Section 10.9.2
 - Interim (Temporary) ponds – the majority of the ponds that ARTA is constructing is to provide detention and WQCV for the roadway projects, these ponds will be on adjacent property and would be relocated with final development of those properties.
 - Will explained the impacts of this as the surrounding topography is fairly flat and that to obtain the required volumes would push the bottom of the ponds lower and that the outfalls would be below the existing grade.
 - Sarah stated that this is not the intent of the criteria and that these are temporary ponds Aurora Water was ok with the forebays being at the same elevations as the bottom of the WQCV and a variance would be granted.
- Detention Pond Berm Widths criteria change from 4 ft to 10 ft (Section 10.9.1 Page 10-19 Bullet 1)
 - Will explained the impacts to widened berms and the requirement for modifying the existing easements that have been obtained.
 - Janet the berm width is for vehicle access to outlet structures for maintenance.
 - Vern if outlet structures are short max 6 feet and other access is provided that this would be ok and a variance would be granted.
- Emergency Overflow Paths (Section 10.9.4, Pg 10-20, Bullet 2)
 - Criteria states
 - An emergency overflow path must be provided that is free of structures or obstructions to convey the spillway design discharge to a downstream ROW or drainageway with adequate capacity for the discharge. No impediments to flow are allowed within the emergency overflow path, such as fences, trees, parking areas, buildings, etc. If a fence around a detention facility is needed to restrict access, the bottom of the fence must be elevated to provide a minimum of one foot of freeboard above the emergency overflow WSEL where the fence crosses the spillway. Nevertheless, fences across spillways should be avoided whenever possible; even if the fence is elevated to the freeboard elevation, there is still the potential for the fence to catch debris floating on the water surface.
 - Will asked for further clarifications as there are items such as fire hydrants, street lighting, signs and landscaping) that would be in the emergency overflow paths.
 - Sarah stated that the intent of the criteria was to prevent structures, fences and other obstructions that would inhibit flow paths, and that signs, trees, lights and fire hydrants would be allowed in the emergency overflow paths.
 - Variance would be granted for standard roadside elements.
 - On The Aurora Highlands Parkway city wanted ARTA to ensure that current designs would not activate the emergency overflows.

Action Items:



6200 South Quebec Street
Greenwood Village, CO 80111
P 303.228.3000 F 303.228.3001

- ARTA to look at Ponds adjacent to TAH Pkwy
- City to review meeting minutes.
- ARTA will incorporate letter to support variance requests to be included in PDRs.



PROJECT STATUS - 12/4/23

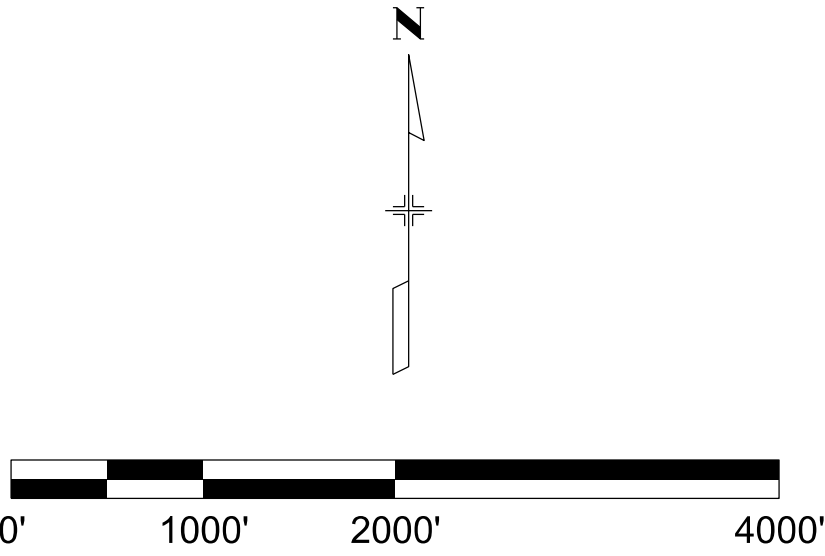
- P

POND PDR/ISP
UPCOMING SUBMITTAL
- P

POND PDR/ISP
UNDER REVIEW
- P

POND FDR/CD'S
READY FOR REVIEW
- P

POND BY OTHERS
- PDR/ISP
UPCOMING SUBMITTAL
- PDR/ISP
UNDER REVIEW
- FDR/CD'S
READY FOR REVIEW



PROJECT	DA NUMBER	EDN/RSN NUMBER
AEROTROPOLIS PKWY (N OF I-70 TO S OF 26th AVE)	TBD	TBD
AEROTROPOLIS PKWY & 26th AVE INTERCHANGE	TBD	TBD
AEROTROPOLIS PKWY (32nd TO 48th AVE)	DA-2062-43	EDN 223219
	PLAT DA-2062-48	
AEROTROPOLIS PKWY (48th TO 56th AVE)	TBD	TBD
32nd/26th AVENUE REALIGNMENT (PICADILLY TO E-470)	DA-2342-01	RSN 1750579
26th AVENUE (E-470 to TAH PKWY)	DA-2062-39	EDN 223185
26th AVENUE (EAST OF POWHATON TO MONAGHAN RD)	DA-2342-02	TBD
THE AURORA HIGHLANDS PARKWAY (38th TO 26th AVE)	DA-2062-32	RSN 1618676
48th AVENUE (E-470 TO AEROTROPOLIS PKWY)	DA-2062-40	EDN 223263
	PLAT DA-2062-49	
48th AVENUE WINDLER (E-470 TO HARVEST RD)	DA-1707-11	RSN 1646498
	PLAT DA-1707-26	
48th AVENUE (AEROTROPOLIS PKWY TO MONAGHAN RD)	DA-2342-03	RSN 1747405
MONAGHAN ROAD (26th TO 48th AVE)	DA-2342-00	RSN 1429068
ATEC N/S COLLECTOR	TBD	TBD
38th AVENUE (AEROTROPOLIS PKWY TO MONAGHAN RD)	TBD	TBD
ATEC MASTER DRAINAGE STUDY	N/A	RSN 1429068